A STUDY ON

ERI GUNMAM

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CONTENTS

INTRODUCTION

'Necesssity is the mother of invention'. Healthy living is essential for every human. Medical field evolved to fulfill the necessity of disease free living. Siddha Maruthuvam was invented by the spiritually enlightened siddhars to led a healthy and eternal living. 'Siddhi'- the word itself implies 'fulfilment of the needs'. Everybody needs eternity which was the plea of siddhars too, which made them to invent a system of medicine – SIDDHA MARUTHUVAM.

In this modern world, due to the irregular dietary habits and stressful life around 80%of the population suffers from peptic ulcer disease. Most of the population come across experiencing the gnawing symptoms of the disease atleast once in their life time.

Peptic ulcer disease had a tremendous effect on morbidity and mortality until the last decade of 20^{th} century, when epidemiological trends started to point to an impressive fall in its incidence. Despite substantial advances, the disease remain an important clinical problem, largely because of the increasingly widespread range of NSAIDS, altered dietary habits.

Epidemiological data from India suggest that peptic ulcer is more common in the poor. The highest incidence (56.5%) of peptic ulcer was among the semiskilled workers and the lower (2.5%) in professional and

managerial group. The prevalance of peptic ulcer increased with age, with a peak prevalence of 28.8% in the 5th decade of life.

In Siddha, drugs are of 3 origin namely herbal, animal and mineral/metallic origin as insisted by the versus,

"வேர்பாரு தழைபாரு, மிஞ்சினக்கால்
பற்ப செந்தூரம் பாரே"

The drug chosen was **GUNMATHUKKU CHOORANAM** – a herbometallic drug in reference with the text **GUNAPADAM – MOOLIGAI VAGUPPU**. The drug is chosen as such that it should eradicate the primary underlying cause of the disease and cure the pathological changes at the concerned site of disease.

The literary reviews on the cause, pathophysiology and management of the disease is done both in scientific and traditional ways. Diagnostic tools of both scientific and siddha methods are utilised for the diagnosis. Scientific evaluation of the drug such as biochemical, pharmacological analysis were done.

The clinical trial with the selection drug **GUNMATHUKKU CHOORANAM** is made on 20 IP and 20 OP patients. Patient selection was made as per the case sheet proforma. This is just a stone work and further large scale clinical evaluation should be done to get better healthy living quality.

AIM & OBJECTIVES

The aim of this dissertation work is to analyse the antiulcer effect of **GUNMATHUKKU CHOORANAM** in the management of **ERIGUNMAM**

Objectives

- To analyse the disease literally.
- To analyse the antispasmodic action of the selection drug(**Gunmathukku chooranam**).
- To analyse the biochemical properties of the trial drug.
- To collect the literary evidences of the ulcer protective and curative effect of the trial drug.
- To utilize both siddha and modern parameters in the diagnostic approach and to document them.
- To document the results of the randomised clinical trial using the trial drug **GUNMATHUKKU CHOORANAM**.

ABSTRACT

Peptic ulcer disease had a tremendous effect on morbidity and mortality until the last decades of 20th century, when epidemiological trends started to point to an impressive fall. Despite substantial advances, the disease remains an important clinical problem. Hence the author decided to focus on the role of the causatives of ulcer disease and conducted a randomized clinical trial in the OPD and IPD of Postgraduate Pothu Maruthuvam Department of Government siddha medical college, palayamkottai. The patients reporting to the OPD were scrutinized and 40 patients of either sex were diagnosed to have peptic ulcer disease of various degrees and included in the trial. Among the 40 patients, 20 patients were treated in OPD and 20 patients were treated in IPD. The treatment was given with traditional medicine gunmathukkku chooranam. The obsevartion revealed promising results. Gunmathukku chooranam effectively manages the manifestation of peptic ulcer disease.

LITRARY REVIEW

SIDDHA ASPECT

Man always struggled with present and attempted for better tomorrow and this can be achieved with a better perspective when the errors of the past and difficulties of the present are solved and planned at proper time. The knowledge of the ancient helps in having a better future.

Diseases of GIT (Gastro intestinal tract) and related organs are described under the entity GUNMAM in our texts. Further Gunmam is classified into 8 different types, namely

1. Vatha gunmam
2. Pitha gunmam
3. Kaba gunmam
4. Vayu gunmam
5. **ERI GUNMAM**
6. Vali gunmam
7. Sathi gunmam
8. Sanni gunmam

as per the saint yugi.

ERIGUNMAM IN YUGI VAIDHYA CHINTHAMANI – 800

"திடுக்குமா **மெரிகுன்மச்** செயலைக் கேளாய்
சிறுவயிற்றி லெரிந்துமே குடல் குமுறும்
வடுக்கும்வாய் நீர்சுரக்கும் தலைவலிக்கும்
வயிறுப்பிக் கிறுகிறுத்தே ஏப்ப மாகும்
வெடிக்குமயிர்க் கால்தோறும் வியர்வை யாகும்
மிகப் பொருமி வயிறுகழிந் திரைச்சலாகும்
எடுக்குமே யுடலிளைக்கு மிரங்கா தன்னம்
எரியுமே யுடலெங்கு மிரும லாமே."

சிறுவயிற்றிலெரிந்து	-	burning sensation in the upper abdomen
குடல் குமுறும்	-	bor boryg mus
வாய் நீர் சுரக்கும்	-	ptylism associated with nausea.
தலைவலிக்கு	-	Headache
வயிறுப்பி	-	indigestion, flatulence distension of abdomen.
கிறுகிறுத்தே ஏப்பமாகும்	-	regurgitation, belching
வெடிக்கும் மயிர்கால்	-	autonomic stimulation
தோறும் வியர்க்கும்		due to the increased pain
மிகப்பொருமி வயிறு கழிந்திரைச்சல்	-	Flatulence, diarrhoea due to indigestion.
உடல் இளைக்கும்	-	nutrition defecit due to poor absorption
இரங்கா தன்னம்	-	loss of appetite
எரியுமே உடலெங்கும்	-	burning sensation of the body due to increased pitham
இருமலாமே	-	cough

ERIGUNMAM IN AGATHIYAR 2000

"வயிற்றை யெரித்துக் குடல்புரட்டி வாய்நீர்கனத்து தலைகனத்து
உயிற்றை யணையக் கிறுகிறுத்து ஓங்கரித்து ஏப்பமுண்டாம்
மயிர்க்கால் வழியே வியர்வாகி வயிறும் பொருமி கண்டூடுகி
லியிற்றை **எரிக்குங் குன்ம**மென்ன இமையோர் சொன்ன குறியாமே."

ERIGUNMAM IN DHANVANDHRI VAIDHYAM – PARTI

"வயிற்றை யெரிக்குங் குடல் புரட்டி வாய்நீர் சுழற்றித் தலைகனமா
முயிர்ப்பை யழிக்கக் கிறுகிறுக்கு மோங்காரிக்கு மேப்பமுண்டா
மயிர்க்கால் வழியே வியர்வரும்பி வயிறு பொருமி யகன்றிடுகி
லியற்றி **யெரிக்குங் குன்ம**மென யிமையோர் சொன்ன முறையாமே".

ERIGUNMAM IN AGATHIYAR AAYUL VEDHAM – 1200

"வயிற்றை எரித்திட்டுக் குடல்வாய் நீர்சுழற்றி தலைகனத்து
உயிர்ப்பை யறியக் கிறுகிறுக்கு மோக்காளித்து வேப்பமுண்டா
மயிர்க் காலளவே வேர்வைவரும் வயிறு பொருமி யகன்றிடுத
லியற்று டனெல்லா மெரிக்கு **மெரிகுன்ம**த்தின் குணமிதுவே."

ERIGUNMAM IN TV SAMBASIVAM PILLAI AGARATHY

Erigunmam is a form of dyspepsia marked by the symptoms viz – burning sensation in the stomach, functional disturbance of large intestine unusual secretion of saliva, vertigo, distension of the abdomen, rumbling noise in the stomach, sour belching, perspiration, diarrhoea, emaciation, cough, loathing of food.

ERIGUNMAM IN VAIDHYA SARA SANGRAHAM :

- வயிறு எப்போதும் இரையும்
- வயிறு பொருமும்
- குடலைப் புரட்டி ஒக்காளிக்கும்
- ஏப்பமிடும்
- துலைகனத்து வலிக்கும், கிறுகிறுக்கும்
- மயிர்க்கால் வழி வியர்க்கும்

ERIGUNMAM IN SIKICHARATHNA DEEPAM :

- வயிற்றில் எரிச்சல், வயிற்றுப்பிசம், வயிற்றிரைச்சல்
- குடல் புரட்டல்
- வாய்நீருதல், வாய்குமட்டல்
- புளியேப்பம்
- சரீரம் இளைத்தல், எரிச்சல்
- அன்னம் செல்லாமை
- இருமல்

ERIGUNMAM IN SEEVARAKCHAMIRTHAM :

- அடிவயிற்றில் எரிச்சல்
- குடல்குமட்டல்
- வாய்நீருறல்
- தலைசுழலல்
- வயிறுப்பல், இரைச்சல்
- புளியேப்பம்
- ரோமத்துளைகளில் வியர்வை பெருகல்

- பேதி
- சரீரம் இளைத்தல்
- அன்னம் செல்லாமை
- இருமல்.

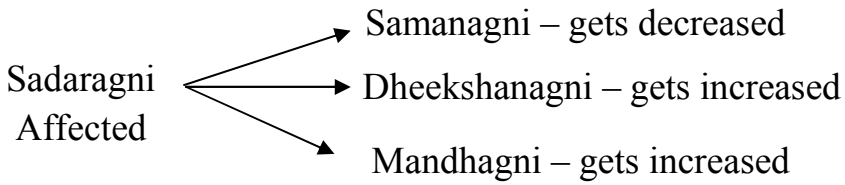
The symptoms are erigunmam were also discussed in other texts like

- YUGI MUNI VATHA KAVIYAM
- ANUBAVA VAIDHYA DEVARAGASIYAM
- SARABENDRAR – GUNMA ROGA SIKITCHAI.

PATHOGENESIS OF ERIGUNMAM

As per the aetiological aspects collected from various siddha literatures we conclude to know food habits and immoral behavioural changes can lead to increase of vatha humour in the pithasthanam namely stomach (அகடு). Hence the equilibrium maintained among the three humours (Vatha, Pitha, Kaba) were disturbed.

Vitiation of vatha causes decrease in pitha. Decreased pitha in stomach portrays that its components sadaragni and Samanan gets affected.



Increased dheekshanagni causes pseudo appetite (ie excessive acid secretion, burning chest)

Increased Mandhagni causes indigestion. (Flattulence, abdominal distension).

Samanan affected ⟶ Viyanan affected ⟶ Epigastric pain

Increased Vatha + Mandhagni

↓

Abanan affected (either increases/ decreases)

↓

Diarrhoea/Constipation

In the pathogenesis of Eri Gunmam, the changes in three humours play major role in the development of diseases which causes changes in udal thathukkal affects the udal vanmai and these pathological changes can be seen by the eight types of examination that is Envagai thervugal.

SYMPTOMATOLOGY [YUGI]

Sl. No	Type of Gunmam	GIT	CNS	CVS	RS	Others
1	Vatha Gunmam	Constipation, Loss of appetite, Dryness of the tongue	Sleepiness, Giddiness, Difficulty in walking, Paraesthesia, Headache, Burning sensation,	-	-	Pain all over the body, Restriction of walking, Heaviness of the body.
2	Pitha Gunmam	Vomitting, Excessive thirst, Constipation	Paraesthesia, Giddiness	-	Cough, Breath lessness	Yellowish discolouration of the face, Fever, Burning micturition
3.	Silethuma Gunmam	Ptylism, Loss of appetite	Haeviness of the head	Gross pallor	Dry cough	Emaciation, Fatiguability, Rigor, Stupor
4.	Sanni Gunmam	Loss of appetite, Borborygmus, Ptylism, Diarrhoea, Burning sensation in the stomach, Salty taste in the tongue	Giddiness, unconsciousness	-	Dry cough, Breath lessness	Rigor, Chillness

5.	Eri Gunmam	Burning sensation in the Stomach, Ptylism, Flatutance, Belching, Diarrhoea, Nausea.	Headache, Giddiness, Perspiration	-	-	Emaciation, Burning sensation all over the body
6.	Vayu Gunmam	Indigestion, Loss of appetite, Flatulence, Pain in lower abdomen	Paraesthesia	-	-	Fatiguability, dryness of the body, Restriction of walking
7.	Saththi Gunmam	Burning sensation in the upper abdomen, Constipation, Loss of taste, Increased appetite	Giddiness, Unconscious ness	-	Cough	Fatiguability, Varicosity, Burning sensation, Restriction of walking
8	Vali Gunmam	Flatulance, Borborygmus, Loss of appetite, Hypochondric pain radiating to back, False appetite.	Disturbed sleep, Unconscious ness	-	-	Dryness of the skin, Body Pain, Back and hip pain, Fever, Stupor

MUKKUTRA THEORY

Generally the human body is divided into three portions namely, Vatha portion, Pitha portion and Kaba portion.

Vatha Portion - From the foot to Umbilicus

Pitha Portion - From the umbilicus to neck

Kaba Portion - From the neck up to the vertex of the head

Five basic elements are essential for the formation of universe namely.

1. Pirithivi (Earth)
2. Appu (Water)
3. Theyu (Fire)
4. Vayu (Air)
5. Akayam (Ether)

This is called Pancha bootha principle. The Pancha bootha principle is also mingled with the Vatha, Pitha, Kaba kaalam. The six taste variation and the seven body elements were also related with Mukkutra theory. The three thathus and tastes are formed by the different combination of five elements.

The combination of five elements in three thathus are as follows.

Vatham → Vayu + Akayam

Pitham → Theyu

Kabam → Appu + Pirithivi

The elemental combination of taste is as follows.

Pirithivi	+	Appu	-	Sweet
Pirithivi	+	Theyu	-	Sour
Pirithivi	+	Vayu	-	Astringent
Appu	+	Theyu	-	Salt
Vayu	+	Theyu	-	Pungency
Aakayam	+	Vayu	-	Bitter

Knowledge of this combination will be helpful to know which dosha has been disturbed and which tastes should be given to correct the deranged dosha.

GNANAENTHIRIYANGAL

The five Gnanaenthiriyangal are.

1. Mei - Feels all types of somatic sensation
2. Vai - Sense of taste
3. Kann - Sense of vision
4. Mookku - Sense of smell
5. Sevi - Sense of hearing.

KANMENTHIRIYANGAL

The five Kanmenthiriyangal are,

1. Kai - Motor activities related to upper limbs
2. Kaal - Motor activities related to lower limbs
3. Vai - Speech
4. Eruvai - Defaecation
5. Karuvai - Reproductive function

VATHAM

The quality of vatham can be described as dry, light, mobile, expansible, quick, cold, rough, clear and astringent in taste.

Vatham is responsible for respiration and control of movements.

Classification of Vatham

It can be classified in to ten types. They are,

1. Piraanan
2. Abaanan
3. Viyaanan
4. Uthaanan
5. Samaanan
6. Naagan
7. Koorman
8. Kirukaran
9. Devathathan
10. Dhananjayan

1. Piraanan

It is responsible for respiration and digestion.

2. Abaanan

It lies below the umbilicus responsible for downward expulsion of stools, urine and constriction of anal sphincter.

3. Viyaanan

It is responsible for the action of all organs, sensation and absorption of food.

4. Uthaanan

It is responsible for the absorption and distribution of food.

5. Samaanan

It is responsible for the activites of other vayus, nutrition and water balance of the body.

6. Naagan

It is responsible for the movements of eyelids.

7. Koorman

It is responsible for the closing of eyelids, yawning and closure of mouth.

8. Kirukaran

It is responsible for the secretions of mouth and nose, appetite, sneezing and cough.

9. Devathathan

It aggravates the emotional behaviours like anger, fighting, frustration, quarreling, argument etc.

10. Dhananjayan

It escapes from the head on the third day after death.

In Eri Gunmam piraanan, abaanan, viyaanan, uthaanan, samaanan and kirukaran are affected and the products symptoms as follows.

1. Affected piraanan produces Indigestion
2. Affected abaanan produces Diarrhoea.
3. Affected uthannan produces Nausea, Vomitting.
4. Affected viyaanan produces Abdominal pain
5. Affected samaanan produces Indigestion.
6. Affected kirukaran produces Loss of appetite.

PITHAM

The qualities of pitham are,

1. Hot
2. Penetrating
3. Slightly foul smelling
4. Liquid
5. Sour and pungent in taste

Pitham is responsible for maintenance of body heat.

The pitha thosham is divided into five types. They are,

1. Anar Pitham
2. Ranjaga Pitham
3. Saathaga Pitham
4. Aalosaga Pitham
5. Praasaga Pitham

1. Anar Pitham

Its action is characteristics of theyu. This is responsible for dryness and digestion of food.

2. Ranjaga Pitham

It is responsible for colour and contents of the blood.

3. Saathaga Pitham

It lies in the heart. It is responsible for the action in accordance to our thinking.

4. Aalosaga pitham

It is responsible for the vision.

5. Praasaga pitham

It is responsible for the complexion of skin.

In Eri Gunmam Anarpitham and Ranjagam, are affected.

1. Affected Analapitham produces indigestion.
2. Affected Ranjagam produces anaemia.

KABAM

The qualities of kabam are,

Greesy	Dense
Smooth	Slow
Soft	Rigid
Sweet	Cold
Stable	Clear

Kabam is responsible for maintenance of body from and structure.

Kabam is classified is to five types.They are

1. Avalambagam
2. Kiletham
3. Pothagam
4. Tharpagam
5. Santhigam

1. Avalambagam

Heart is the seat of Avalambagam. It controls all other Kabam.

2. Kiletham

Stomach is the seat of Kiletham. It gives moisture and softness to the ingested food.

3. Pothagam

Tongue is the seat of Pothagam and it is responsible for the sense of taste.

4. Tharpagam

Head is the seat of Tharpagam. It cools the eyes.

5. Santhigam

It lies in the joints and responsible for the action of joints.

In Eri Gunmam, Kiletham is affected.

Affected Kiletham produces Loss of appetite.

1. Increased Vatham

Emaciation, desire to hot food, tremor, abdominal bloating, constipation, fatigue, sleeplessness, giddiness and laziness are the symptoms of increased vatham humour.

2. Decreased Vatham

Pain all over the body, low voice, loss of motor function, decrease in IQ, unconsciousness and diseases of increased kabam are the symptoms of decreased vatham humour.

3. Increased Pitham

Yellowishness of eye, stools, urine and skin. Excessive thirst and appetite, burning sensation of the body and sleeplessness are the symptoms of increased pitham.

4. Decreased Pitham

Decrease in digestive fire, decreased body temperature, loss of skin complexion and pathological intervention during normal physiological increase of kabam are the symptoms of decreased pitham.

5. Increased Kabam

Decrease in digestive fire, increased salivation, inactiveness, haeviness of the body, dyspnoea, cough, increased sleep and separation of thathus due to defective cohesive force by increased kabam.

6. Decreased Kabam

Giddiness, flattening of chest, increased sweating, palpitation, loss of lubrication and protuberance of joints are the symptoms of decreased kabam.

Factors which promote Vatham

Diet Habits

"தொழில் பெறுகைப்புக் கார்த்தல் துவர்த்தல் வஞ்சுஞ் சோறும்
பழயதாம் வரகு மற்றைப் பைந்தினை யருந்தினாலும்
எழில்பெற பகலுறங்கி இரவினிலுறங்காத தாலும்
மழைநிகற் குழலினாலே வாதங் கோபிக்கும் காணே"
"காணவே மிகவுண்டாம் கருது பட்டினி விட்டாலும்
மானனையார் கண் மோக மிறக்கினு மிகுந்திட்டாலும்
ஆணவ மலங்கடம்மை யங்கனே விடாததாலும்"

- பரராச சேகரம்

Excessive intake of spicy, pungent, astringent, unhealthy food habits, sleeping in the day time, loss of sleep in the night, excessive food or starvation, excessive indulgence of sex and ego are raising the vatham.

"காலங்கள் மாறியுண்ணும் காரியத்தாலுந் தண்ணீர்
சாலவே மருந்தினாலும் சந்தியுலுட் கார்ந்தாலும்
கோலமாய் புளிப்பு நெய்யை குறைவற வருந்தினாலும்
வாலவார் முலை நல்லாளே வாத முற்பவிக்கும் காணே".

- பரராசசேகரம்

Irregular diet habits, excessive in take of impure water, drug which increases vatham, sour and ghee promotes vatham

"புளிதுவர் விஞ்சுங்கறி யாற்பூரிக்கும்வாதம்"

-நோய்நாடல் நோய் முதல் நாடல் பாகம்-1

Sour and astringent taste holds its part in raising the Vatham.

Factors which promotes Pitham

"வெய்யிலி னடக்கை யாலும் வெம்பசி மிகுத்தலாலும்
துய்யதோர் நறுநெய் யான்பால் துய்த்தலை விடுத்தலாலும்
நையவே வருங்கோ பத்தை நண்ணலாற் கசப்பை நாளும்
கையுற வுண்ண லாலுங் கதித்திடும் பித்த தோஷம்".

"பித்தத்தை விளைவிக்கு மென்று பேசிய வுணவை நாளும்
மெத்தவே யருந்தலாலும் மிகுந்திடு துயரத் தாலும்
நித்திரை யிலாமை யாலு நினைவுகண் மிகுத்தலாலும்
மற்றுள வேது வாலும் வர்த்திக்கும் பித்த தோஷம்".

- பரராசசேகரம்

Over exposure to sun, excessive appetite, insufficient intake of ghee and milk, anger, excessive intake of pungent, excessive intake of food which increases pitham, deep sorrow, loss of sleep and stressful conditions promote Pitham.

"ஒளியுவர் கைப்பில் பித்துச் சீறும்"

- நோய்நாடல் நோய் முதல் நாடல் பாகம்-1

Excessive intake of salty and bitter taste, increases Pitham.

Factors which promotes Kabam

Sweet and pungent, the taste which promotes kaba kuttram.

In Eri Gunmam vatha kuttram and pitha kuttram are predominately vitiated.

"தொடர்வாத பந்தமலாது **குன்மம்** வராது"

- தேரையர்

"ஏற்றிய **குன்மம்** எழுந்த விதங்கேள்

தோற்றிய பித்தமும் வாயுவும் தொந்திக்கில்"

- திருமூலர்

"ஏகிய **குன்ம**ந்தானும் எழுந்ததோர் விதங்கள் சொல்வோம்

வாகிய பித்தத்தோடு வாதமும் பரிந்து சேரில்"

- அகத்தியர்

The vitiation of vatham and pitham are due to irregular food habits and physical activities etc. As a result of vitiated vatham and pitham, uthaanan, abaanan, samaanan and anarpitham are vitiated.

The vitiation of the above resulted in indigestion, pain in the abdomen, bloating, increased peristalsis and vomiting etc. which are the signs and symptoms of Eri Gunmam. The persistance of the above results in debilitation of udal kattugal.

SEVEN UDAL KATTUGAL

There are seven primary tissues which constitute the entire human body and all the organs of the various systems.

1. Saaram

It is the end product of digestive process. It gives strength to the body and mind.

2. Senneer

The Saaram after absorption is converted into senneer. It is responsible for knowledge strength and healthy complexion.

3. Oon

It gives figure and shape to the body. It shapes the body according to a person's work.

4. Kozhuppu

It lubricants the organs and facilitates their function.

5. Enbu

Gives shape to the body helps locomotion and protects vital organs.

6. **Moolai**

Present in side the bone and it gives strength maintains the normal condition of the bone.

7. **Sukkilam / Suronitham**

Responsible for reproduction.

In Eri Gunmam Saaram and Seneer are affected.

1. Affected Saaram produces Loss of appetite, Tiredness.
2. Affected Senneer produces Anaemia and Loss of appetite.

PINIYARI MURAIMAI [DIAGNOSTIC METHODS]

The diagnostic method to find out the disease in siddha system is known as ‘Piniyari muraimai”.

It is very important part of the treatment. It is helpful to select the correct line of the treatment and good prognosis.

It is based on the following principles.

1. Porial Arithal
2. Pulanal Arithal
3. Vinathal

I. Poriyal Arithal

Poriyal arithal means the art of perception five organs viz.

1. Skin
2. Tongue
3. Eyes
4. Nose
5. Ears

II. Pulanal Arithal

It is an art of knowing objective series viz.

1. Touch
2. Hearing
3. Vision
4. Taste
5. Smell.

III. Vinathal (Interrogation)

The Physician should interrogate about the patients name, age, sex, occupation, native, socio-economic status, dietary habits, prone to any allergens, complaints, history of previous illness, history of habits and frequency of attacks. If the patient is in the stage of inability to speak or a child, physician should interrogate the details with his immediate relatives who are taking care of him.

ENVAGAI THERVUGAL

The important method adopted to diagnose the disease is by means of Envagai thervugal. The value of Envagai thervugal is very important for diagnosing purpose, which is unique and special method describing in siddha system of medicine.

In Agasthiyar Vaidhya vallathi 600, Envagai thervugal has been mentioned as “Attavitha paritchai”

“தொக்கலுற்று அட்டவித பரிட்சை தன்னை
துலக்கமுறும் பண்டிதரே தெளிவாகப்
பகுக்கரிய நாடியை நீ பிடித்துப்பாரு
பகர்கின்ற வார்த்தைப்பார் நாவைப்பாரு
வகுக்கரிய தேகமெனத் தொட்டுப்பாரு
வளமான சரீரத்தின் நிறத்தைப்பாரு
சகிக்கரிய மலத்தைப்பார் சலத்தைப்பாரு
சார்ந்த விழிதனைப் பார்த்து தெளிவாய் காணே”

- அகஸ்தியர் வைத்திய வல்லாதி 600

The Envagai thervugal are

"நாடி ஸ்பரிசம் நாநிறம் மொழிவிழி

மலம் மூத்திரமிவை மருத்துவ ராயுதம்"

- தேரையர்

Envagai thervugal constitute

1. Naadi
2. Sparism
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

1. NAADI (PULSE)

The study of 'Naadi' is the important factor in Envagai Thervugal which gives almost correct diagnosis. The unique factor which is responsible for the soul in the body is known as 'Naadi'. Naadi may be studied in ten places in the body, which are heel, genital organ, abdomen, chest, ear, nose, neck, hand, eyebrow and vertex. But the study of naadi at hand is the best because the radial artery is located superficially.

Naadi must be studied in right hand for men and left hand for women. The three uyir thathukkal are formed by the combination of

Edakalai	+	Abaanan	→	Vatham
Pinkalai	+	Piraanan	→	Pitham
Suzhumunai	+	Samaanan	→	Kabam

They can be felt one inch below the wrist in the radial side by means of palpation and percussion with the tip of the index, middle and ring fingers, corresponding to Vatham, Pitham and Kabam respectively.

The three humours exist in the ratio of 1:1/2:1/4normally. Derangement of this ratio leads to various deseases.

"கரிமுகனடியை வாழ்த்திக்
கைதனில் நாடி பார்க்கில்
பெருவிரலங் குலத்தில்
பிடித்தடி நடுவே தொட்டால்
ஒருவிரலோடில் வாதம்
உயர்நடு விரலில் பித்தம்
திருவிரல் முன்றி லோடில்
சேத்தும நாடி தானே".

- அகத்தியர் குருநாடி சாஸ்திரம்

In the Gunma noi, following naadi can be felt, commonly Vatha Naadi, Pitha Vatha Naadi, Vatha Pitha Naadi.

Vatha Naadi.

"வாதமெனும் நாடியது தோன்றில்
சீதமந்தமொடு வயிறுபொருமல் திரட்சிவாயு
சீதமுறுங் கிராணி மகோதரம் நீராமை
திரள்வாயு சூலைவலி கடுப்புத் தீரை
நீதமுறுங் கிருமி **குன்மம்** அண்டவாதம்
நிலையும் நீர்க்கிரிச்சரங்கள் தந்துமேகம்
பேதகமா முதரப்பிணி மூலரோகம்
பேசவெகு பிணிக்களுக்கும் பொருளதாமே".

- சதகநாடி.

Pitha Vatha Naadi

"சிறப்பான பித்தத்தில் வாத நாடி
சேரிலுறுந் தாதுநட்ட முதரபீடை
உறைப்பாகச் செரியாமை **குன்மஞ்** சூலை
யுற்றசுரங் கிராணி வயிற்றிரைச்சல் மந்தம்
அறைப்பான ஓங்கார புறநீர்க் கோவை
ஆயாச மிரக்கமொடு மயக்க மூர்ச்சை
முறைக்காய்வு விஷவீக்கம் மூலவாய்வு
முரடான நோய்பலவு முடுகும் பண்பே".

- சதகநாடி.

Vatha Pitha Naadi

"வாதமும் பித்தங் கூடி
வன்பெலத் துடனே யோடிற்
றீதறு வயிற்றி னுள்ளே
திரண்டதோர் மந்தம் பற்றி
வேதனை யெரிப்புங் கூட்டி
விரண்டிடு **மெரிதக் குன்மம்**"

சித்த மருத்துவம்

பித்த மிகுதியுடன் உட்டிணம் சேர்ந்ததாலுண்டாகும் குறிகுணங்கள்.

"தழைப்பான பித்தத்திலுட்டிணங் கொண்டால்
சயமத்தி சுரம் வெதுப்பு சத்திகுணம்
களைப்பான பொருத்து ளைவுவதி சாரங்கள்
கடுப்புடனே **வயிற்றுவலி** மூலவாயு
இறைப்பாகி யூண்மறுத்தல் நாக்கசப்பு
இரவில் கனவுடனே சங்கா தோடம்
பழைப்பான பயித்திய நோயெரிவு தாகம்
வந்தணுகில் பலபிணிக்கும் வகையதாமே".

- சதகநாடி.

ஐயமிகுதியுடன் வாயு சேர்ந்ததாலுண்டாகும் குறிகுணங்கள்

"தொந்தித்த சேத்துமத்தில் வாயு கூடித் தொடர்ந்த

குன்மம் நெஞ்சடைப்பு சுவாச காசம்

வந்தித்த குரல்தனியே உறுத்தலீளை

வழுவழுப்பு நீருறல் மலத்தில் சீதம்

வெந்தித்தல் கொழுத்தல் குத்துந் திமிர்வியாதி

வீச்சுடனே வலியெட்டுந் திரட்சி பாண்டு

அந்தித்த கிறுகிறுப்பு மயக்கம் விக்கல்

ஆனபல பிணிகளுமே வந்தட ருந்தானே".

- சதகநாடி.

"வாதந்தான் உதறி நிற்கில்

வலிகுன்மம் வந்து சேரும்"

- குணவாகடநாடி

"வாதத்தால் வலிகுன்மம் சூலை

குன்மம் வலிகுன்ம முண்டாம்"

"பித்தத்தால் பித்த குன்மம்

எரிகுன்மம் சத்தி குன்மமுண்டாம்"

"ஐயத்தால் ஐயகுன்மம் சன்னி

குன்முமாம்"

-சித்த மருத்துவம்

2. SPARISAM (PALPATION)

By sparism the temperature of skin (heat and cold), smoothness or roughness, sweat, dryness, hard patches, swelling, growth of abdominal organs, tenderness and nourishment can be felt.

In Eri Gunmam, Tenderness is present in the epigastric region.

3. NAA (TONGUE)

By the examination of tongue its colour, coating, dryness, deviation, movements, variation in taste, ulcer and the condition of teeth and gums, ability to appreciate the taste can be noted.

In Eri Gunmam the tongue may be coated. If anaemia is present the tongue is pale.

4. NIRAM (COLOUR)

By the examination of niram the type of thegam (body), cyanosis, redness, pallor, yellowish discolouration can be noted.

Vatha Thegi → Dark colour

Pitha Thegi → Yellow or red colour

Kaba Thegi → White or yellow colour

5. MOZHI (SPEECH OR VOICE)

In the examination of mozhi, the pitch of voice (low or high), slurring and speech in hallucination can be noted.

6. VIZHI (EYE)

By the examination of vizhi, pallor, redness, yellowishness, dryness, lacrimation, sharpness of vision must be noted.

7. MALAM (STOOLS)

By the examination of malam its nature, colour, quantity, presence of blood or mucus can be noted.

In Eri Gunmam diarrhoea may be present.

8. MOOTHIRAM (URINE)

The examination of urine is classified into two types.

i. Neerkuri

ii. Neikuri

"அருந்து மாறிரதமும் அவிரோத முமாய்
அஃகல் அலர்தல் அகாலவூன் தவிர்ந்தழற்
குற்றள வருந்தி உறங்கி வைகறை
ஆடிக் கலசத் தாவியே காதுபெய்
தொரு முகூர்த்தக் கலைக்கட்படு நீரின்
நிறக்குறி நெய்க்குறி நிருமித்தல் கடனே".

- தேரையர்.

Preparation of Patient

Prior to the day of urine examination, the patient is advised to take the balanced diet and the quantity of food must be proportionate to his appetite. He should have a good sleep.

இயற்கை நீர் இலக்கணம்

"மிகத்தடிப்பும் மிகத் தேறலும் இன்றெனில்
சுகத்தைத் தரும் மெய்சுபாவ நீர் நன்றே"

i. NEERKURI

1. Niram - Niram indicates the colour of urine voided.
2. Edai - Edai indicates the amount of urine
3. Manam - Manam indicates the smell of the urine voided.
4. Nurai - Nurai indicates the frothy nature of the urine voided.
5. Enjal - Enjal indicates the quantity (increased or decreased) of urine voided.

In addition, frequency of micturition and sediments are noted.

ii. NEIKURI

"நிறக்குறிக் குரைத்த நிருமான நீரிற்
சிறக்க வெண்ணெய் யோர்சிறுதுளி நடுவிடுத்
தென்றுறத் திறந்தொலி யேகாத மைத்ததி
னின்றதிவலை போம் நெறி விழியறிவும்
சென்றது புகலுஞ் செய்தியை யுணரே"

- தேரையர்

Method

Early morning urine is collected in a glass container and examined within 1½ hours. A drop of gingelly oil is added side of the vitreous without disturbing. The nature of the spread of oil should be noted in direct sunlight.

Observation:

If drops of oil,

Lengthens like a snake	→	Vatha neer
Spreads like a ring	→	Pitha neer
Appears like a pearl	→	Kaba neer

Spreads like,

Snake in ring Ring in pearl Snake in pearls etc	Thontha Neer

"அரவென நீண்டினஃதே வாதம்"

"ஆழிபோல் பரவின் அஃதே பித்தம்"

"முத்தொத்து நிற்கின் மொழிவதென் கபமே"

"அரவிலாழியும், ஆழியில் அரவும்
அரவின் முத்தும் ஆழியில் முத்தும்
தோற்றில் தொந்த தோடங்களாமே".

- நோய்நாடல் நோய் முதல்நாடல்

Beside Envagai Thervugal a disease can also be diagnosed by means of other methods namely kanmenthiriyangal, gnanaenthiriyangal, uyir thathukkal, ezhu udal thathukkal, paruva kalangal and thinaigal.

Hence a through knowledge about the disease can be studied out systematically and properly in siddha system of medicine.

THINAIGAL

Nilam is classified in to five types. They are,

1. Kurinji

Mountain and its surroundings. Kaba noigal and liver diseases are common.

2. Mullai

Forest and its surroundings. Pitha noigal, vatha noigal and liver diseases are common.

3. Marutham

Field and its surroundings. Safest place to maintain good health.

4. Neithal

Sea and its surroundings. Vatha diseases and liver enlargements are common.

5. Paalai

Desert and its surroundings. Vatha, Pitha, Kaba noigal are common.

Studies of five lands are very much needed as some diseases are common in the particular lands.

Each region has its own characters which influences the inhabitation, physical, mental, economic, occupational and cultural activities. In each region same ailments are endemic based on the climatic features. Prevention and curative measures for these ailments are stated in medical literatures.

Eri Gunmam is common in Mullai, Neithal and Paalai.

PARUVAKAALANGAL

A year is classified into six seasons each constituting two months. They are

1. Kaarkaalam	-	Avani & Purattasi	- Aug & Sep
2. Koothirkaalam	-	Iyppasi & Karthigai	- Oct & Nov
3. Munpani Kaalam	-	Margazhi & Thai	- Dec & Jan
4. Pinpani Kaalam	-	Masi & Panguni	- Feb & Mar
5. ElavenilKaalam	-	Sithirai & Vaikasi	- April & May
6. Muthuvenilkaalam	-	Aani & Aadi	- June & July

Some of the diseases are commonly prevalent during a particular season and study of its will also be useful for diagnosis.

UDAL VANMAI

It means strength and Vitality of the body and classified into three types.

1. Eyarkkai Vanmai	-	Inherited immunity
2. Kala Vanmai	-	Age, season and time
3. Seyarkkai Vanmai	-	Improvements of 3 vitality obtained by diet, day to day habits and physical exercise.

KAALAM [AGE AND DISTRIBUTION]

In Siddha text, the normal human life is 100 years. It is divided into 3 stages based on dominat humours.

Stage	Years	Dominant Humours
First Stagte	First 33 years and 4 Months	Vatha period
Second Stage	Second 33 years and 4 months	Pitha Period
Third Stage	Third 33 years and 4 months	Kaba Period

DIFFERENTIAL DIAGNOSIS

1. PITHA GUNMAM

"நோம்பித்த குன்மத்தி னுட்பங் கேளாய்
நுனிமஞ்ச ணிறம்போல முகமுமாகும்
வாஞ்சத்தி வாந்தியுண்டாய் மன மறுக்கும்
மயக்கமாய் நெஞ்சதனிற் கோழைகட்டும்
கரம் நெருப்பாய்த் தானிருக்கும் கைகா லோயும்
கடும் வெய்யிற் கண்டவுடன் தலை சுழற்றும்
போமுத் திரஞ்சிவந் திருக்குந் தாகங் காணு
முக்கியே மலம் வீழும் மூச்சுண்டாமே".

- யூகிவைத்திய சிந்தாமணி

Yellowish discolouration of the face, nausea, vomitting, excessive sputum, hyperpyrexia, pain in the upper and lower limbs, giddiness, haematuria, excessive thirst, constipation and dyspnoea.

In Eri Gunmam there is no yellowish discolouration of the face, heamaturia, hyperpyrexia and excessive sputum.

2. VAYU GUNMAM

"பார்க்கவே வாயுகுன்மம் பகரக் கேளாய்
பருகியதோர் பதார்த்தங்கள் செரித்திடாது
தேர்க்கவே யசனந்தான் செல்லா தாகும்
துருத்திகொள் காற்றது போல் வயிறுமுப்பும்
ஊர்க்கவே உள்பெலனும் கெடுப்பதாகும்
உடலுலரும் நடைகுறையும் ஓய்ச்சலாகும்
வேர்க்கவே யடிவயிறு தனிலே வந்து
மிகப்புரண்டு வில்லுப் போல் விகுத்தலாமே".

- யூகிவைத்திய சிந்தாமணி

Indigestion, loss of appetite, borborygmus, malaise, tiredness, general debility, lower abdominal pain.

In erigunmam there is no lower abdominal pain.

3. VALI GUNMAM

"திமிராக வயிறூதுந் திரையு மேனி
செடமுலைந்து கருத்தழியுஞ் சிதறுந்தூக்கம்
வமிராக வயிறிரைந்து முன்போலாகும்
வருத்தமா யசனமிகத் தானுஞ் செல்லா

முமிராக விலாவதனிற் சொருகலாகும்

முதுகுதண்டு வலிகாணு மிடுப்பு நோவாம்

கமிராக காயமது கடுப்பு காணும்

கனசுரமாய் பொய்பசியுங் காணுங்காணே".

- யூகிவைத்திய சிந்தாமணி

Abdominal bloating, dryness of the skin, mental confusion, disturbed sleep, loss of appetite, pain in the hypochondrium, pain in the vertebral coloumn and hip, hyperpyrexia and false appetite.

In Eri Gunmam there is no pain in the vertebral coloumn and hip, and hyperpyrexia.

FINAL DIAGNOSIS

After the confirmation of diagnosis as Gunmam, the type of the Gunmam is confirmed by comparing the identities and differences of the signs and symptoms and the results obtained by Envagai Thervugal, Naadi and Mukkutram.

THEERUM, THEERA NILAI

"என்றதில் வாதகுன்மம் வலிகுன்மம் சத்திகுன்மம்

துன்றிய சூலகுன்மம் சொல்லுமி தசாத்தியந்தான்

கன்றிய பித்தகுன்மங் கபகுன்மங் குன்மசூரை

யென்**றெரி குன்மம்** நான்குமுண்மையாய் **தீருங்காணே".**

- தன்வந்திரி வைத்தியம்

According to Dhanvanthiri vaidhyam Eri Gunmam is a curable disease by the treatment.

"உறுதிகொண்ட வலுவீச்சு சந்நிதோடம்

உரத்த கரம் விடசோபை உள்ளுரோகம்

மறதியுள்ள கிராணி யதிசாரங் குன்மம்

. . . .

. . . . . னிந்நோயில் வீக்கம் வந்து

தோன்றிடுகில் மரணமென்று தொகுத்துச் சொல்லே".

- சதகநாடி.

"சொல்லுகின்ற விடபாகம் வீக்கஞ் சோகை

. . . . . .

வீறான குன்ம மத்தி சுரங் காமாலை

வல்லமையா யிந்நோயில் வயிற்று ளைச்சல்

வந்தணுகில் மரணமென்று வசனிப் பாயே".

"தானான பிரமேகம் வாதசூலை

சார்வான நீரிழிவு குன்ம ரோகம்

.. . .

ஊனாகும் வருமிடத்தில் அதிசாரங்கள்

உண்டாகில் அசாத்யமா முறுதி தானே"

" புகலுவதுகேள் அத்திவாயு வாகா

பொருத்துவதோர் வாயுவதிலே குன்ம மாகா

தகைமை பெறும் குன்மமதில் பேதியாகா

. . . . . .

தோன்றிடுகில் மரணம் வந்து தொடரும்தானே".

- சதகநாடி

According to Sathaga Naadi, the Gunmam which is associated with oedema, colic pain, dysentery, hiccough, dyspnoea, unconsciousness are the signs of bad prognosis and leads to death.

TREATMENT (PINI NEEKAM / MANAGEMENT)

The aim of pini neekam is based on

1. To bring the thirithosha in equilibrium
2. Treatment of the disease signs and symptoms
3. Pathiyam.

Siddha system of medicine is based on the mukkutra theory and hence the treatment is mainly aimed to bring down the thirithosha to its equilibrium state and thereby restoring the physiological condition of various thathus.

"விரேசனத்தால் வாதம் தாழும்"

"வமனத்தால் பித்தம் தாழும்"

"நசிய அஞ்சனத்தால் கபம் தாழும்".

- நோய் நாடல் நோய் முதல்நாடல்

Vatha disease can be brought down by viresanam, Pitha disease can be brought down by vamanam, Kaba disease can be brought down by nasiyam and anjanam.

"தொடர்வாத பந்தமலாது குன்மம் வராது"

- தேரையர்

"ஏற்றிய குன்மம் எழுந்த விதங்கேள்

தோற்றிய பித்தமும் வாயுவும் தொந்திக்கில்"

- திருமூலர்

"ஏகிய குன்மந்தானும் எழுந்ததோர் விதங்கள் சொல்வோம்

வாகிய பித்தத்தோடு வாதமும் பரிந்து சேரில்"

- அகத்தியர்

"பித்தத்தால் பித்தகுன்மம்

எரிகுன்மம் சத்தி குன்மமுண்டாம்"

-சித்த மருத்துவம்

Since the Eri Gunmam occurs due to the vitiation of vatham and pitham, it can be set right by giving viresanam and vamanam.

For viresanam strong purgatives containing nervalam are usually avoided and laxatives like Nilavagai choornam – 5 to 10 gm with hot water at bed time is given for this study.

For vamanam and viresanam any one of the following may also be given.

1. Sanjeevi Mathirai	-	1 to 2 pills with sufficient amount of honey and Illai Kalli Juice early in the morning.
2. Vasambu decoation	-	15 to 30ml early in the morning.
3. Vamana Kashayam	-	30 to 60ml early in the morning.
4. Kumatti ennai	-	10 to 15ml early in the morning
5. Siddhathi ennai	-	5 drops early in the morning
6. Merugulli ennai	-	8 to 15ml early in the morning.

According to the patient's body built and severity of the disease the selection of the medicine and dosage may be altered.

TREATMENT OF DISEASE

After the thirithosha are brought down to its equilibrium state the signs and symptoms of disease should be treated properly for this study.

Manimanthirathy choornam - 2mgs BD with hot water

Guduchiyathy Kashayam - 90ml BD.

PREVENTION OF DISEASE

Thiruvalluvar says that when a patient approaches a physician for a disease, the physician should follow some important points.

1. Diagnosis of disease
2. Causes of disease
3. Tretment of disease.

"நோய் நாடி நோய் முதல்நாடி அதுதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்".

-திருக்குறள்

Thiruvalluvar also says some preventive measures

"மருந்தென வேண்டாவாம் யாக்கைக்கு அருந்தியது
அற்றது போற்றி யுணின்".

"அற்ற தறிந்து கடைபிடித்து மாறல்ல
துய்க்கத் துவரப் பசித்து"

"தீயள வன்றித் தெரியான் பெரிதுண்ணின்
நோயாள வின்றிப் படும்".

"மாறுபா டில்லாத உண்டி மறுத்துண்ணி
னூறுபா டில்லை யுயிர்க்கு".
"இழிவறிந் துண்பான்க ணின்பம்போ னிற்குங்
கழிபே ரிரையான்க ணோய்".

- திருக்குறள்

PATHIYAM

During the course of the treatment all the patient were given uniform hospital diet. The patients also adviced to follow certain precaution and physical activities. Adviced to get rid off spicy foods, alcohol, stress and strainful condition, roughage diet, semi cooked and unhygenic diet. Patients were advised to avoid non – vegetarian diet. Adviced to take regular meals.

HABITS

Patients were advised to get rid off the smoking, alcohol, chewing tobacco etc., advised to have timely diet.

YOGASANA TREATMENT

Yogasana according to Thirumanthiram is basic principle science for achieving salvation during life itself. As the body is said to be the residence of divinity the saint Thirumoolar has advised each and every individual who aspires for self realization to build up his physical body and mind to practice yogasana.

In Yogam, asanam is the first step in practice. By practicing yogasana the physical body and the mind are brought under control aiding. Perfect meditation and concentration which will enable to achieve vivegam, essential for self realization. The concise aim for yogam is to possess sound body and sound mind to achieve longevity for attaining salvation, if the body falls pray to several diseases, constantly the mind gets perverted leading to last prejudice misunderstanding or ignorance.

Asanas are nothing but a sort of yogic exercise, which differs from physical exercise. Thirumoolar in his Thirumanthiram describes the uses of yogasana under the heading “Attanga Yoga”.

The asanas are strongly advocated for controlling Eri Gunmam. The technique of practicing it is to be learnt under the guidance of a yogasana specialist who has the knowledge of disease process.

The following asanas are useful to treat the abdominal disorders.

- Uthana Padhmasanam
- Bhujangaasanam
- Salabasanam
- Patchimoathasanam,
- Pavanamukthasanam
- Savaasanam.

- சிறப்பு மருத்துவம்

MODERN ASPECTS

ANATOMY

Anatomy of the Stomach

The stomach is a muscular bag. It is the most dilated part of the gastrointestinal system. It has both digestive and not digestive functions. It's development is in the foregut. It is situated in the upper abdomen, left hypochondriac, epigastric and umbilical regions.

It is normally **J shaped.**

Capacity

New born → 30 ml

At puberty → 1000 ml

Adult → 1500 to 2000 ml

Shape

When empty the stomach is somewhat J shaped. When partially distended it becomes piriform in shape. In obese persons it is more horizontal.

Size

It is about 10 inches long and the mean capacity is one Ounce (30 ml) at birth, one litre at puberty and 1.5 - 2 litres or more in adults.

External Features

The stomach has

1. 2 openings or ends.(orifices)
2. 2 borders.
3. 2 surfaces
4. 2 peritoneal sacs are related to it.
5. 2 omenta are attached to it.

Openings of the Stomach

Cardiac end

This is the upper opening of the stomach. This is not an anatomical sphincter. The oesophagus opens in to the stomach at the level of T_{11} vertebra.

Pyloric end

This is the lower opening of the stomach. It is situated 1.25 cm to the right of the midline at the transpyloric plane. It opens into the duodenum. It has a well defined anatomical pyloric sphincter. Pyloric groove separates it from the duodenum. The pyloric end is greenish as it is stained by the bile.

Borders of the stomach

It has 2 borders

1. Lesser Curvature.
2. Greater Curvature.

Lesser Curvature

It is the right upper border. It is the direct continuation of the right border of angularis. Lesser curvature gives attachment to the lesser omentum. A peptic ulcer commonly occurs along or nearer to the lesser curvature.

Greater Curvature

It is the lower and left border of the stomach. It is 5 times longer than the lesser curvature. Between the oesophagus and greater curvature the cadiac notch is situated.

To the greater curvature the following peritoneal folds are attached,

1. Gastrophrenic ligament.
2. Gastro Splenic ligament.
3. Greater Omentum

Surface of the Stomach

It has two surfaces,

1. The antero superior surface.
2. The postero inferior surface.

Structures forming the stomach bed

1. The diaphragm (left crus)
2. The left kidney.
3. The left supra renal gland.
4. The splenic artery and spleen.
5. Body of the Pancreas.
6. The transverse Mesocolen.

7. The left colic flexure.

Parts of the Stomach (Fig.1)

1. Fundus
2. Body
3. Pyloric Antrum
4. Pyloric canal.

Fundus

It is the highest part of the stomach. Usually it is filled with gas.

Body

It is situated below the fundus.

Pylorus

It is situated along the right side of the body of the stomach.

BLOOD SUPPLY

ARTERIAL SUPPLY

Along the lesser Curvature

1. Left gastric artery from coeliac artery.

2. Right gastric artery from hepatic artery.

Along the greater Curvature

1. Right gastroepiploic artery from the gastroduodentral artery.

2. Left gastroepiploic artery from the splenic artery.

Fundus of the stomach

5-6 short gastric arteriers from splenic artery.

Venous Drainage

Among the lesser Curvature

1. Left gastric vein.
2. Right gastric vein – into portal vein.

Among the greater Curvature

1. Left gastroepiploic vein into splenic vein.
2. Right gastroepiploic vein into superior mesentric vein.

Fundus of the Stomach

5-6 short gastric veins into splenic vein.

Nerve supply

Parasympathetic supply

1. Right and left vagus nerves via anterior and posterior gastric nerves.
2. Oesphageal plexus.

Sympathetic Supply

The greater splanchnic nerve (T_5 – T_9) joins the coeliac ganglion. From the ganglion post – ganglionic fibres continues to form the coeliac flexus.

STRUCTURE OF THE STOMACH

1. Serosa or Peritoneum which envelops the stomach completely except along the greater and lesser curvatures.

2. Musculosa of stomach are arranged as follows;
    a. Outer longitudinal
    b. Intermediate circular.
    c. Inner Oblique.
3. The submucous layer has only loose connective tissue.
4. The Mucosa is the innermost layer.

    The glands of the stomach are situated in the mucous membrane.

    a. The gastric glands are mainly mucous secreting.
    b. The glands of the fundus and most parts of the body contain 3 types of cells.
        - ❖ The mucous neck cells.
        - ❖ The chief cells of zymogenic of peptic cells.
        - ❖ The parietal or oxyntic cells.

LYMPHATIC DRAINAGE

The stomach can be divided into 4 lymphatic territories.

1. Area A or pancreatosplenic nodes lying along the splenic artery.
2. Area B drains into the left gastric nodes.
3. Area C drains into the right gastroepiploic nodes.
4. Area D drains in different directions into the pyloric, hepatic and left gastric nodes.

ANATOMY OF THE DUODENUM

The duodenum is the shortest, widest, thickest, most fixed, supra umbilical, infra hepatic, posterior abdominal, proximal part of small intestine. It is developed from the foregut and midgut. Its length is about

25 cm . It commences at the continuation of the pyloric end of the stomach at the level of L_1 vertebra.

Course

The duodenum passes upwards, backwards and to the right side to the level of the neck of gall bladder. It forms the superior duodenal flexure. It then runs vertically downwards along the right side of the lumbar vertebral column, to the level of lower border of the L_3 vertebra. It terminates by becoming the jejunum at the duodenojejunal flexure at the level of body L_2 vertebra.

Parts of the duodenum (Fig.2)

It is divided into 4 parts,

1. First part or the superior part 5cm long
2. Second part or the descending part 7.5cm long.
3. Third part or the horizontal part 10cm long.
4. Fourth part or the ascending part 2.5cm long.

First part of duodenum (Superior part)

Its length is 5 cm. It is situated at the pyloric end of stomach to the superior duodenal flexure, on the right side of body of L_1 vertebra. It is greenish due to bile staining.

Second part of duodenum (Descending part)

Its length is 7.5 to 8 cm. It extends from superior duodenal flexure to the inferior duodenal flexure in the right side of the lumbar vertebral column from the lower border of L_1 to the lower border of L_3 Vertebra. It is slightly convex to the right side.

Third part of Duodenum

This is the longest part of the organ. It crosses the midline just above the umbilicus. Its length is about 10 cm. It extends from right surface of body of L_3 vertebra to the left surface of the body of L_3 vertebra.

Fourth part of duodenum

Its length is 2.5 cm. It extends from the level of anterior surface of abdominal aorta to the duodenojejunal flexure at the left surface of L_2 Vertebra.

Blood Supply

I. Part

1. Supra Duodenal artery of Wilkie
2. Retro duodenal artery

These both are branches of the gastro duodenal artery.

1. Infra duodenal artery – branch of right gastroepiploic artery.

II, III &IV parts

1. Superior Pancreatico duodenal Artery.
2. Inferior Pancreatico duodenal Artery.

Venous drainage

Veins accompany the arteries and ends in the superior mesenteric vein.

Sympathetic drainage

I part

1. Hepatic nodes.
2. Sub pyloric nodes.

II, III & IV parts

Pancreatico Splenic lymph nodes.

Nerve Supply

I part

Sympathetic Supply

By greater splanchnic nerve through the coeliac plexus.

Parasympathetic Supply

Posterior gastric nerve.

II, III & IV parts

Sympathetic Supply

Superior mesentric plexus.

Parasympathetic Supply

Vagus.

PHYSIOLOGY

Gastro intestinal functions are ingestion, digestion and absorption of food. Food provides necessary materials for tissue growth and repair and energy for doing work.

Food consists of carbohydrates, proteins, fats, vitamins, minerals and water. Most of these are made up of molecules, which cannot be utilized as such by our body cells.

Digestion is the process by which more complex food substances are broken down into simpler forms which are easily absorbed and assimulated by the cells.

The digestion can be classified as

1. Chemical digestion
2. Mechanical digestion.

The chemical digestion is effected by the enzymes present in the digestive juices secreted by the digestive glands namely,

a. Salivary glands - saliva
b. Gastric glands - gastric juice
c. Intestinal glands - intestinal juice
d. Pancreas - pancreatic juice
e. Liver - bile

GASTRO INTESTINAL SECRETION

Gastro intestinal secretion has both exocrine and endocrine

secretions. The endocrine cells have a wide spread heterogenous distribution in the mucosa of the digestive tract. Secretion is effected by active transport against electro chemical gradient.

The mechanical digestion is effected by the movement of the alimentary canal. The movements are

a. Mastication or chewing occurring in the mouth
b. Deglutition
c. Gastric movement
d. Small intestinal movements and movements of villi
e. Large intestinal movements
f. Defaecation

DIGESTION IN THE MOUTH SALIVARY GLANDS

Digestion in the mouth is carried out by the digestive juice saliva which is secreted by the salivary glands.

SALIVA

The volume of saliva secreted in 24 hours is 1000 – 1500ml during meal time the secretary rate is highest. During sleep it is less. It is colourless, cloudy and slimy. Reaction is slightly acidic. pH varies from 5.75 to 7.05. The pH of saliva is dependent on the relative concentration of free and combined CO_2

Forced breathing causes a decrease in the CO_2 and increased pH. Specific gravity of the mixed saliva is between 1.002 and 1.012.

COMPOSITION OF THE MIXED SALIVA

Water	99 to 99.5%
Solids	0.5 to 1.1%
Inorganic Salts	0.4 to 0.6%
Organic Substances	0.1 to 0.4%

Ptyalin is the salivary amylase. The optimum pH for amylase activity is 6.97 lingual lipase secreted by lingual glands initiates fat digestion. Immuno globulins founds in the saliva are IgA, IgG & IgM.

These act as antibodies against normal and abnormal organisms found in the mouth and the lumen of the gut.

Parotin is a hormone secreted by parotid and submaxillary gland.

Other organic substances present in the saliva are kallikrein. It has lubricating function, solvent and cleaning action. Mercury, Potassium, Iodide and Lead are excreted in the saliva. Morphine, Penicillin, Streptomycin and Chlortetracycline are also excreted in the Saliva. Ptyalin acts on boiled starch and converts it into maltose.

Digestion in the mouth is helped by the mechanical process namely mastication or chewing. This enables proper mixing of food with saliva and facilitates enzyme activity. The muscles of mastication are Masseter, Temporalis and Pterygoid muscles. These are supplied by the mandibular division of the trigeminal nerve.

Deglutition or swallowing movements occur about 600 times during the day. Deglution takes place in three stages, the first stage in the mouth, second stage in the pharynx, and the third stage in the oesophagus.

FIRST OR ORAL STAGE

During the first stage, the food passes from the mouth into the pharynx. By the act of mastication, the food is softened and lubricated and the food bolus is placed over the dorsal surface of the tongue. The back of the tongue is elevated and retracted against the hard palate. The movement forces the food into the pharynx.

SECOND OR PHARYNGEAL STAGE

It begins as a reflex and is completed in a second. The food bolus is transmitted into the pharynx by the downward and backward movement of the base of the tongue. The entrance of food bolus into the pharynx gives rise to a strong peristaltic pushing the food into oesophagus.

THIRD OR OESOPHAGEAL STAGE

This is reflux in nature. The primary peristaltic waves arriving at the oesophagus from the pharynx continue into the oesophagus sweeping the bolus downward into the stomach. During the third stage these are pressure variations in the oesophagus.

The pressure pattern consists of an initial negative wave followed by the three positive pressure components. The 3 positive waves are due

to subsequent increase in the intra oesophageal pressure due to secondary peristaltic contractions and presence of food contents.

LOWER OESOPHAGEAL SPHINCTER

At the junction of oesophagus with the stomach, the musculature is well organized and constitutes the lower oesophageal sphincter. This is made up of three components.

- The oesophageal Stomach
- Gural part of diaphragmatic skeletal muscle
- Obligue or sling fibres of the stomach

The lower oesophageal sphincter remains tonically contracted during the period in between meals and relax upon swallowing. The LES is under neural control. Vagal stimulation and release of acetyl choloric causes contraction of the intrinsic sphincter.

RECEPTIVE RELAXATION OF THE STOMACH

As the oesophageal peristaltic wave passes towards the stomach, a wave of relaxation preceeds the constriction. Further the entire stomach and to a less extent duodenum becomes relaxed as this wave reaches the lower end of the Oesophagus.

DIGESTION IN THE STOMACH AND DUODENUM

Digestive juice in the stomach is the gastric juice, secreted by the gastric glands.

GASTRIC GLANDS

Tubular glands which extend from the bottom of the gastric foveola to the muscularis mucosa. On the basis of their location, the gastric glands are divided into cardiac glands which are short and tortuous and the fundic glands which are straight slender glands with narrow lumen and made up of Mucous cells, pepsinogen or chief cells and parietal or exyntic cells. The pyloric glands in the pyloric region of the stomach are short and tortuous.

Stimulation of parasympathetic vagus gives rise to secretion of the gastric juice rich in acid and enzymes. It also increases gastric secretion. The secretion is mediated through release of acetylchloine.

GASTRIC JUICE AND THE SECRETION

The gastric juice is the product of surface epithelium and the various glands. The volume of the gastric juice secreted in man is 1200 – 1500ml per day, pH become 2-3 when the gastric juice mixes with the food. Specific gravity is 1.002 – 1.004.

The major constituents are water, HCl, enzymes – pepsin, rennin, gastric lipase, gelatinase and mucus, electrolytes as sodium, potassium, calcium, phosphate, bicarbonate and sulphate.

HCl SECRETIONS

Hydrochloric acid is secreted by oxyntic cells parietal cells or secreting cells. These contain small channels called canaliculi which

communicate with the lumen of the gastric gland. The HCl is secreted by the membrane of these canaliculi. It is an active process involving expenditure of energy, O_2 utilization, CO_2 evolution and enzymes systems participation. Secretion of 1gm molecular weight of HCl requires expenditure of 10,000 gram calories of energy. The source for hydrogen ions is water and the source for chloride ions is Nacl of blood. Hydrogen ions are formed by dissociation of water into hydrogen and Hydroxyl ions. This is the main source of hydrogen ions. The hydrogen ions combines with OH ions H_2O and HCO_3 ions are released into the interstitial fluid and blood.

In a simple way, the reactions involved are,

$$\mathbf{CO_2 + H_2O + NaCl \rightarrow HCl + NaHCO_3}$$

CONTROL OF GASTRIC SECRETION

There are 3 Phases in gastric secretion – Cephalic, gastric and intestinal phase; the gastric secretion is regulated by both nervous and hormonal mechanism. The Parasympathetic vagus promotes gastric secretion. The hormone gastrin stimulates gastric secretion and the hormone entero gastrone inhibits gastric secretion.

CEPHALIC PHASE

Sight, smell, taste of food and even the thought of food brings about gastric secretion. Both conditional and unconditional reflexes are involved. This is also called psychic phase.

GASTRIC PHASE

The entry of food into the stomach brings about secretion of gastric juice. Distension of the stomach wall initiates local reflexes and brings about release of gastrin from 'G' cells. This phase accounts for more than 2/3 of the total gastric secretion and it losts for several hours.

INTESTINAL PHASE

Entry of food into the duodenum brings about gastric secretion. This is mainly through the release of gastric hormone from the duodenal mucosa. There is only small quantity of secretion during this phase.

INHIBITION OF GASTRIC SECRETION

The entry of food into the small intestine initiates an enterogastric reflex through intrinsic nerve plexuses. This reflex inhibits gastric secretion. The inhibitory hormones of gastric secretion are enterogastrone, secretin and cholecystokinis, gastric inhibitory peptide (GIP) and vasoactive intestinal peptide (VIP).

GASTRIC DIGESTION

Inactive pepsinogen is converted into active pepsin by HCl. This acts on proteins and polypeptides and cleave peptide bonds adjacent to

aromatic aminoacids. Fats in the emulsified state are digested and converted into fatty acids and glycerol, For example egg fat.

FUNCTIONS OF THE STOMACH

1. Secretion of HCl – Kills many of the ingested bacteria and maintains sterility in the stomach.
2. Stomach as a storage organ – Resting volume is 50 -100ml. In the filled state the volume is 1500ml.
3. The parietal cells of gastric mucosa secrete intrinsic factor, promoting absorption of vitamin B_{12} from the small intestine.

PEPTIC ULCER

DEFINITION

The term peptic ulcer refers to an ulcer in the lower oesophagus, stomach or duodenum, in the jejunum after surgical anastomosis to the stomach or rarely in the ileum adjacent to a Meckel's diverticulum.

Ulcers in the stomach or duodenum may be acute or chronic, both penetrate the muscularis mucosa but acute ulcer shows no evidence of fibrosis, erosions do not penetrate the muscularis mucosa.**(Fig.4)**

EPIDEMIOLOGY

The incidence of peptic ulcer is decreasing in many western communities, Asian contries, it still affects, at sametime approximately 10% of all adult males. The male to female ratio for duodenal ulcer varies from 5:1 to 2:1 in different communities whilst that for gastric ulcer is 2:1 or less. Variations in the incidence of gastric and duodenal ulcer occur between different countries and between different parts of the same country; the incidence of peptic ulcer is becoming more common in many developing countries. There is growing evidence that cigarette smoking prevents healing of gastric and duodenal ulcers and may be a factor contributing to their development.

The male to female ratio varies geographically, for example from 1:1 in USA, to 18:1 in India. The duodenal ulcer ratio varies widely from

place to place for example from 0:8 in Japan to 19:1 in Africa and 32:1in India.

The incidence is reportedly high in Calcutta and low in Punjab, the incidence of peptic ulcer is recorded high in South India.

AETIOLOGY - ETIOPATHOGENESIS

HEREDITY

Patients with peptic ulcer often have a family history of the disease. This is particularly in the case with duodenal ulcers which develop below the age of 20 yrs.

ACID – PEPSIN THEORY : VERSUS MUCOSAL RESISTANCE

The gastric mucosa has an extraordinary capacity to secrete acid. Peptic cells (or) chief cells which present in fundus of the stomach secrete pepsin. Parietal cells scatered along the course of body and fundus secrete HCl by a process involving oxidative phosphorylation.

The estimated concentration of HCl secreted by parietal cells is approximately 160ml. Each secreted hydrogen ion (H^+) is accompanied by a chloride ion (Cl^-). For each hydrogen ion secreted into the gastric lumen, one bicarbonate ion is released in to the gastric venous circulation, accounting for so called alkaline tide, bicarbonate is released from carbonic acid generated from carbon dioxide by parietal cell carbonic anhydrase.

Several mechanisms protect the gastric mucosa from hydrogen ions secreted into the lumen of the stomach. The surface epithelial cells secrete bicarbonate which creates an alkaline tale at the surface of the mucosa. This bicarbonate secretion is under the influence of mucosal prostaglandins. The tight junctions between the epithelial cells and their surface lipoprotein layer provide a mechanical barrier. The normal turnover of epithelial cells and gastric mucus also has a protective function. Collectively all these mechanisms can be described as the **'Gastric mucosal barrier'**.

Peptic ulcer disease is thought to result from an imbalance between gastric acid, pepsin and protective factors (mucosal barrier).

"NO ACID NO ULCER"

FACTORS REDUCING MUCOSAL RESISTANCE & NSAID's

Several drugs, particularly those used in rheumatoid arthritis, will disrupt the gastric mucosal barrier. When as a pH below 3.5 it is undissociated and fat soluble, so that it is absorbed through the lipoprotein membrane of the surface epithelial cells, during absorption it damages the membrane and the tight junctions. It also inhibits prostaglandin shynthesis thus reducing bicarbonate secretion by the surface epithelial cells. Aspirin has been shown to be an important etiological factor in gastric ulcer in Australia, and this may also be so in other countries where is a high consumption of aspirin.

HELICOBACTER PYLORI INFECTION IN PEPTIC ULCER (Fig.3)

In 1979 Robin warren, an Australian pathologist, accidentally invented the curved spiral shaped bacteria that invades the gastric mucosa and causes ulcer. He named it as **campylobacter pyloridis**. Later it was renamed as **Helicobacter pylori**. H.pylori is found primarily in deep portion of the mucous gel layer.

The Helicobacter pylori infection is strongly associated with chronic superficial gastritis leading to peptic ulcer. H.pylori reduces the resistance of gastric mucosa against acid and gastric ulcer result. It stimulates the gastrin secretion which inturn stimulates the acid production leading to the exposure of first part of duodenum to the excessive acidity producing duodenal ulcer. The formation of gastric metaplasia may also occur in the first part of the duodenum in response to the excessive acid. This gastric metaplasia allows the conclusion of H. pylori in the duodenum.

OCCUPATIONAL FACTOR

Peptic ulcer is common in South Indian agriculturists. It is also common in executives, doctors and industrialist.

SOCIO – ECONOMIC FACTORS

Poor socio-economical factor may be one of the factors in incidence of duodenal and gastric ulcers. In South India, duodenal ulcer is particularly prevalent among the poor people.

DIET

Peptic ulcer is associated with high consumption of refined, as compared with unrefined cereal and carbohydrate. The lack of protein deficient diet and untimely meals in these refined food resulting in a failure to buffer gastric acid. **Mr.Henry jones** has described that ingestion of refined cereals is the promino factor in the increased incidence of duodenal ulcer.

SMOKING, ALCOHOL AND DRUGS

Incidence of peptic ulcer is high among smokers than in among non smokers. Gastric ulcers tend to heal more rapidly in patients who stop smoking than in those who do not. Gastric ulcer commonly occurs in association with alcoholic cirrhosis. There is much suggestive evidence that and treatment with aspirin, phenylbutazone etc., may aggravate peptic ulcer incidence.

CONSTITUTIONAL FACTORS

Sex incidence male to female ratio for duodenal ulcer varies from 5:1 to 2:1 in different communities whilst that for gastric ulcer in 2:1 or less.

BLOOD GROUPS

Peptic ulcer tends to be more common in people with **blood group "O".**

ASSOCIATION WITH ANXIETY AND PERSONALITY

Chronic anxiety, frustration, physical fatigue are personality traits.

ASSOCIATION WITH OTHER DISEASES

Peptic ulcers in association with almost all diseased, the incidents is noted in patient with achlorhydria namely pernicious anaemia and atrophic gastritis, gastric carcinoma, duodenal stasis, emphysema, corpulmonale, rheumatoid disease, cirrhosis of liver and tuberculosis.

PATHOLOGY

Chronic gastric ulcer is nearly always single, 90% are situated on the lesser curvature within the antrum or at the junction between body and antral mucosa.

Chronic duodenal ulcer is usually situated in the **first part of the duodenum** just distal to the junction of pyloric and duodenal mucosa 50% are on the anterior wall. More than one peptic ulcer is found in 10-15% of case. Acute ulcers or erosions are frequently multiple and are more widely distributed.

Types of peptic ulcer

1. Acute peptic ulcer
2. Chronic peptic ulcer

ACUTE PEPTIC ULCER

Acute peptic ulcers developing after head injury, burns, severe sepsis, surgery or trauma are termed stress ulcers. Gastric hyper secretion is the usual cause of acute ulcer after head injury, while the reflux of duodenal contents and mucosal ischemia may be responsible factors after burns or shock.

CHRONIC PEPTIC ULCER

1. Chronic gastric ulcer (GU)
2. Chronic duodenal ulcer (DU)

GASTRIC ULCER (GU)

Incidence of GU peaks in the 6^{th} decade, approximately 10 yrs later than for DU. Slightly more than half of GUs occurs in males. The precise incidence of GU is not known, since many GUs are asymptomatic. Although DU is identified clinically more frequently than GU, most autopsy studies show an equal or greater proportion of GUs.

GUs is deep, penetrating beyond the mucosa of the stomach and are similar histologically to DUs, but usually with more extensive gastritis surrounding the ulcer. Almost all benign GUs are found immediately distal to the junction of the antral mucosa and the acid secreting mucosa of the body of the stomach. The location of this junction is variable. In general, antral mucosa extends approximately two thirds of the way up the lesser curvature and one-third of the way up the

greater curvature of the stomach. Benign GUs is rare in the fundus of the stomach.

DUODENAL ULCER

Duodenal ulcer is characteristically a chronic and recurrent disease. It is usually deep and sharply demarcated. More than 95% of DUs occur in the first portion of the duodenum and approximately 90% of those are located with in 3 cm of the junction of the pyloric and duodenal mucosa.

DUs are usually less than 1 cm in diameter, rarely they are extremely large 3-6 cm in diameter (giant DUs).

DUs now appear to be approximately as common in males.

CLINICAL FEATURES

DUODENAL ULCER – SYMPTOMS

1. EPIGASTRIC PAIN

Epigastic pain is the most frequent symptom in duodenal ulcer. The pain is often described as sharp burning or gnawing. However, it may be ill defined, boring or aching or may be perceived as abdominal pressure or fullness or as a hunger sensation.

In approximately 10% of patients the pain is located to the right of the epigastrium. The pain of DU characteristically occurs 90 min to 3 hrs after taking food and frequently awakens the patient at night. It is usually relieved within a few minutes by food (hunger pain) or antacids.

Episodes of pain may persist for periods of several days to weeks or months.

Pain is aggravated by coarse foods, alcohol, nervous tension and undue fatigue.

Pain is episodic in nature occurring regularly each day for days of week at a time, then disappearing to recur weeks or months later. Between attacks, the patient feels perfectly well, and may eat and drink with impurity. Bouts of pain may at first last only a day or so at a time, and occur only once or twice a year. As the natural history evolves, however episodes begin to last longer and occur more frequently, so that in severe cases remissions of pain may be short lived and pain or discomfort becomes more or less persistent. The cause for those relapses is difficult to establish.

2. DISTENSION

Such individuals may complain of other symptoms such as a feeling of distension in the epigastrium or a poorly defined sense of unease after eating.

3. OTHER COMPLAINTS INCLUDE EPISODIC

Nausea, anorexia always relieves pain and when it is persistent may result in weight loss. Persistent vomiting in an ulcer subject usually indicates some degree of gastric out flow obstruction.

SIGNS

1. POINTING SIGN

Ulcer pain is typically referred to the epigastrium, in the midline or to the right, it is usually localised so that the patient can indicate the site with one finger known as the "**pointing sign".**

2. MUSCLE GUARDING OR RIGIDITY

May be present with active ulcer or deeply penetrating ulcer.

3. PERISTALTIC WAVES

May be observed in presence of obstruction gastric splash may suggest gastric retention due to duodenal ulcer near pylorus.

Obstruction due to,

a. Inflammation.
b. Scarring due to surgeries.

4. OCCULT BLOOD IN STOOLS

GASTRIC ULCER

1. EPIGASTRIC PAIN

As with duodenal ulcer, epigastric pain is the most common symptom, but the pattern is less characteristics. The pain may be precipitated or accenuated by food and symptom relief with food or antacids is less consistent than with duodenal ulcer.

2. NAUSEA & VOMITING

In duodenal ulcer patient nausea and vomiting almost always indicate gastric outlet obstruction; in patients with GU they may occur in the absence of mechanical obstruction.

3. WEIGHT LOSS

Weight loss may occur due to anorexia or aversion to food developing from the discomfort produced by eating.

GUs tends to heal but then recur, often in the same location.

COMPLICATIONS

Complications of peptic ulcer are haemorrhage, perforation and gastric outlet obstruction and cancer.

1. GASTRO DUODENAL HAEMORRHAGE
2. ACUTE PERFORATION OF A PEPTIC ULCER
3. GASTRIC OUTLET OBSTRUCTION
4. DUMPING SYNDROME
5. TEA -POT DEFORMITY / “HANDBAG STOMACH”
6. HOURGLASS CONTRACTURE OF STOMACH
7. PENETRATION INTO PANCREAS
8. CARCINOMA OF THE STOMACH

DIFFERENTIAL DIAGNOSIS

1. CHRONIC INTESTINAL AMEOBIASIS

There is history of recurrent dysentery, caecum and pelvic colon are tender and cord like liver may be palpate and tender. Stool may show cysts of entamoeba histolytica.

2. CHRONIC CHOLECYSTITIS

There may be history of biliary colic and jaundice in the past murphy's sign is positive. Rarely gall bladder may be palpating cholecystography settles the diagnosis by showing dysfunction of the gall bladder with or without store.

3. CHRONIC APPENDICITIS

There may be history of acute appendicitis in the past, **mcburney's point** is tender, FTM and barium meal X-ray of stomach show normal finding but barium meal X-ray of appendix may show irregularity or no filling.

4. CHRONIC GASTRITIS

There is anorexia, discomfort in the upper abdomen without any definite tenderness, FTM shows low acid but excess of mucus in all samples, barrium meal X-ray shows coarse or fine gastric rugae.

5. CHRONIC PANCREATITIS

There may be history of acute pancreatitis in the past, pain radiating to the back may be present without definite relation with food,

steatorrhoea and diabetes mellitus may be present. Straight X-ray of the abdomen may reveal pancreatic classification.

6.ZOLLINGER- ELLISON SYNDROME

This is rare disorder in which severe peptic ulceration occurs due to usually an adenoma or hyperplasia of the islets of the panceras secreting large amounts of gastrin which simulates the parietal cells of the stomach excessively. The acid output may be so great that the acid tide may reach the upper small intestine, reducing the luminal P11 to 2 or less, at this P11, pancreatic lipase is inactivated and bile acid may be precipitated, causing diarrhoea and streatorrhoea. Excessive gastric secretion results in large volumes on aspiration under 'basal' conditions. Pentagastrin does not increase the secretary rate much above basal values. Since the stomach is already continuously secreting at or near maximal rates.

The ulcer are often multiple and severe and may occur in unusual sites such as the jejunum or the oesophagus. The history is usually short and bleeding and perforations are common. The syndrome may present in the form of severe recurrent ulceration following a standard operation for peptic ulcer, the underlying cause not having been recognised. The diagnosis should be suspected in all patients with unusual or severe peptic ulceration, especialy course barium meal examination shows abnormally course gastric mucosal folds. It may be confirmed by finding very high level of gastrin in the circulation.

INVESTIGATIONS

1. ENDOSCOPY IN GASTRO – ENTEROLOGY

Kusmaul who had witnessed sword swallowers at country fairs, felt that it should be possible to pass a tube down the oesophagus for direct visualisation of the interior of the oesophagus and stomach. Mucouliez studied gastro scope in 1881. By 1911, **elsmer** reported the use of gastroscope. In 1928, **Schindler** decided to build a flexible instrument. In about four years with help of optical from be devised the flexible gastro scope which was first demonstrated in may 1932. This flexible instrument may be said to have revolutionsed gastroscopy. Benedict, tomenius and others added biopsy forceps or suction cups.

In recent years endoscopic photography still and motion, has become possible and gives excellent pictures. The flexible fibroscope now enables one to examine the oesophagus, stomach and duedenum and at the same time obtain biopsies and material for cytological examination.

It is used diagnosis purpose for the oesophagitis, oesophagial ulcer, gastric ulcer, duodenal ulcer, duodenitis, malignant cancer, biopsy can also be obtained to find out the gastric ulcer is benign or malignant.

FRACTIONAL TEST MEAL

The patient who was on starvation during the previous night is asked to swallow the ryles tube at 5 a.m and the entire stomach contents a fasting juice are aspired with a 20 ml record syringe. The patient is then

given a pint of warm gruel to drink. The gruel is prepared by boiling two table spoonfuls of the oatmeal in two pints of water until the quantity is reduced to one pint. Every 15 minutes not more than 15 ml of gastric content is now aspirated until 2½ hours have elapsed or until such time as 15ml can no longer be aspirated. These samples are examined for,

1. Total activity
2. Free HCL
3. Bile
4. Blood
5. Mucus
6. Starch and sugar
7. Lactic acid
8. Combined activity
9. Presence of pepsin
10. Total chloride

In a gastric ulcer, the curves of free HCl, and total activity are highly normal or just above the normal limit. Blood may be present in some of the specimen. The climbing curve is due to pyloric spasm which prevents regurgitation of bile or allows the acidity to rise continuously. Besides carcinoma, achlorhydria is found in pernicious anaemia, gastritis, chronic appendicitis etc., but association of blood in all the specimens is strongly suggestive of a carcinoma. Sometimes cancer cells and be demonstrated into washing after gastric levage.

This test is no more needed to make correct diagnosis of peptic ulcer except to exclude the role of vagotomy during surgical management.

EXAMINATION OF STOOL

Black and tarry stool (Melaena) is well known in peptic ulcer when the haemorrhage is large. Small haemorrhage need special chemical test for deduction (Motion for occult blood).

RADIOLOGICAL FEATURES OF PEPTIC ULCER (BARIUM MEAL SERIES) (Fig. 5)

Peptic ulceration only occurs in those parts of the alimentary canal which are bathed in the acid and pepsin secretions. The radiological features of peptic ulcer vary from a mild mucosal errosion to a malignant ulcer.

a. Sites of gastro duodenal ulcers – Acute gastric ulcer.
b. Acute duodenal ulcer.
c. Benign ulcers.
d. Malignant.

Although in clinical experience duodenal ulcer are far more frequent than gastric ulcer in the ratio of 10 or 20:1 they are approximately equal.

ROENTGEN SIGNS OF ULCERATION

The presence of a ‘fleck’ or crater. This sign represents the presence of barium and is regarded as essential for the diagnosis.

CHANGES IN THE NEIGHBOURING RUGAE

These are oedema, irregularity and the cart wheel appearance in which the rugae radiate from the fleck or crater.

Functional changes such as spasm, increase in peristalsis or irritability are common.

CHARACTERISTICS ASSOCIATED WITH THE SITE OR ULCERATION

Ulcers in the body of the stomach are more prevalent along the lesser curvature. Ulcers of the greater curvature are rare.

MUCOSAL RELIEF WITH SMALL AMOUNT OF BARIUM SHOWS

1. Barium sport or fleck.
2. Edematous mucosa at base.
3. Radiating rugae.
4. Coarse rugae often there.
5. When seen in profile it is an out pouching with a broad base. Most often on lesser curvature. But requires flourscopy in every degree of obliquity for demonstration.

RADIOLOGICAL FEATURES OF MALIGNANT GASTRIC ULCER

1. Irregularity in mucosa adjoining ulcer niche.
2. No peristalsis here.

3. The niche does not extend beyond line of stomach.
4. Associated duodenal ulcer usually indicated the gastric ulcer is benign.
5. Ulceration of greater curvature is usually malignant.

A less common site for ulcers is the pyloric but ever here it tends to occur along the lesser curvature. This ulcer produces a gastric stasis.

DUODENAL ULCER

The common site for duodenal ulcer is in the duodenal cap and they may occur on either anterior or posterior walls. Less frequently post bulbar area.

Radiological features are

A. Acute penetrating or errosive stage

1. Ulcer niche.
2. Edematous mucosal halo.
3. Thick pyloric rugae.
4. Spastic.

B. Begining scar formation

1. Ulcer niche.
2. Thickened surrounding mucosa.
3. Rugae converging like chart wheel spokes.
4. Pseudo diverticulum formation.
5. Bulb may appear fragmented on compression.

C. Late scarring stage

1. Niche or pseudo diverticulum.
2. Contracted deformed fibrotic bulb rigid walls.
3. Thick pyloric rugae.

   Post bulbar ulcers shows deformed bulb.

MATERIALS AND METHODS

Clinical Study:

The Clinical study of Erigunmam was undertaken in post Graduate department of pothumaruthuvam, Govt Siddha Medical College, Palayamkottai.

20 patients were admitted for study period. According to their severity they were admitted as In-Patients and followed up as Out-patients.

The medicine was also subjected to trial with 20 Out-patients.

Selection of patients:

The patients were selected on the basis of the clinical findings of Epigastric pain, burning chest, nausea, vomiting, belching, flatunce, loss of appetite, diarhoea.

Detailed history of the patient contains past, personal and family histories, diet, habits, occupational history, socio-economic status, smoking, Alcoholism, prolonged exposure to NSAID.

Siddha Diagnosis:

Siddha method of diagnosis with the following parameters, such as Thegam, Kaalam, Gunam, Mukkutram nilaigal, Envagai thervugal, UdalKattugal, poriyal arithal, Pulanal arithal, Vinathal etc.

The diagnosis of Erigunmam which correlates with peptic ulcer disease also made by physical examination of the patients as well as laboratory and radiological investigation.

Investigations:

All cases were subjected to investigations that include TC, DC, ESR, Hb, Blood Sugar, urea, cholesterol serum bilirubin, serum creatinine . Urine analysis for Albumin, Sugar, Deposits in the laboratory of Govt. Siddha Medical College Hospital.

Upper GI endoscopy was performed in Aarthi Scans, Palayamkottai.

Management:

According to tridhosa theory, laxatives are given first. So for this, "Nilavagai Chooranam" is recommended, 10gm with hot water at bed time was given before starting the specific treatment.

Treatment:

The trial medicine used in the present clinical study is Gunmathuku Chooranam 2gm (twice daily with water, before meals). All the patients were advised to follow the pathiyam (Dietary regimen) and best recovery of "Erigunmam".

Reference:

Gunapadam mooligai vaguppu.

Evalution of trial medicine:

The trial medicine was subjected to biochemical and pharmacological analysis in the respective laboratories of Govt. Siddha Medical College, Palayamkottai.

The observations were made for all In-patients and Out-patients. This results and observations were recorded properly in profoma.

At the time of discharge all were advised to follow further treatment in Out-patients department of Pothu Maruthuvam. Then they were advised to follow the personal hygiene, regular diet, adequate intake of water and mental relaxation by meditation and yoga etc.

RESULTS AND OBSERVATION

The results were observed in the following criteria by clinical study on 20 Inpatients and 20 Out patients.

1. Sex Distribution
2. Age Distribution
3. Kaalam
4. Constitution of body
5. Gunam
6. Religion
7. Socio-economic status
8. Aetiological Factors
9. Food habits
10. Family history
11. Clinical Manifestation
12. Mode of onset
13. Kosam
14. Kanmenthiriyam
15. Mukkutram
    a. Derangement of vatham
    b. Derangement of Pitham
    c. Derangement of Kabam
16. Ezhu udal kattugal
17. Envagai Thervugal
18. Neer Kuri
19. Nei Kuri
20. Examination of the Abdomen
21. Blood grouping
22. Gradation of Results.

1.SEX DISTRIBUTION.

Table1 illustrates the distribution of sex

Table 1

Sl. No	Sex	No. of Cases		Percentage%	
		OP	IP	OP	IP
1.	Male	13	8	65	40
2.	Female	7	12	35	60

Males were affected more in OP study (65%)

Females were affected more in IP study (60%)

2. AGE DISTRIBUTION. (Fig A)

Table 2 illustrates the distribution of age.

Table 2

Sl. No	Age groups in years	No. of .cases		Percentage %	
		OP	IP	OP	IP
1.	20 to 30	2	1	10	5
2.	31 to 40	4	2	20	10
3.	41 to 50	7	8	35	40
4.	51 to 60	4	8	20	40
5.	61 to 70	3	-	15	-
6.	71 to 80	-	1	-	5
7.	81 to 90	-	1	-	5

35% of OP patients were between age 41 to 50.

20% of OP patients were between age 31 to 40 and 51 to 60.

40% of IP patients were between 41 to 50 and 51 to 60 age.

3. KAALAM (Fig B)

Table 3 illustrates the distribution of Kaalam

Table 3

Sl. No	Kaalam	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Vathakalam (0-33 yrs)	2	1	10	5
2.	Pithakalam (34-67yrs)	17	18	85	90
3.	Kabakalam (68-99yrs)	1	1	5	5

Patients in pitha kaalam of age 34 to 66 was affected both in OP (85%) and IP (90%) trial groups.

4. CONSTITUTION OF BODY

Table 4 illustrates the distribution of Thegi

Table 4

Sl. No	Constitution of body	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Vatha thegi	3	2	15	10
2	Pitha thegi	10	11	50	55
3.	Kaba thegi	2	1	10	5
4.	Thontha thegi	5	6	25	30

Pitha thegi contributed 50% of OP and 55% of IP study group.

Vatha thegi contributed 15% of OP and 10% of IP study group.

Thontha thegi contributed 25% of OP and 30% of IP study group.

5. GUNAM

Table 5 illustrates the distribution of gunam

TABLE 5

Sl. No.	Gunam	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Sathuva Gunam	-	-	-	-
2.	Rajo Gunam	20	20	100	100
3.	Thamo Gunam	-	-	-	-

All 100% cases of OP and IP trial group had Rajo gunam.

6. RELIGION

Table 6 illustrates the distribution of Religion

Table 6

Sl. No.	Religion	No. of. Cases		Percentage	
		OP	IP	OP	IP
1.	Hindu	16	18	80	90
2.	Christian	3	2	15	10
3.	Muslim	1	0	5	-

Hindus were affected 80% in OP study and 90% in IP study.

7. SOCIO-ECONOMIC STATUS. (Fig C)

Table 7 illustrates the socio economic status of the patients.

TABLE 7

Sl. No.	Socio- Economic Status	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Poor	6	10	30	50
2.	Middle class	12	10	60	50
3.	Rich	2	-	10	-

In OP trial group 60% of trial group belong to middle socio economic status, and 30% belong to poor socio economic group. In IP trial group poor and middle socio economic status accounted 50% age.

8. AETIOLOGICAL FACTORS. (Fig D)

Table 8 illustrates the Aetiological factors for disease.

TABLE 8

Sl. No.	Aetiological Factors	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Alcohol	8	5	40	25
2.	Smoking	8	6	40	30
3.	Irregular diet	15	16	75	80
4.	Psychological(stress and strain)	8	9	40	45
5.	Hereditary	1		5	-
6.	Drug (NSAID)	10	13	50	65

40% of OP patients had history of alcoholism, smoking and stress.

75% of OP trial group had irregular dietary habit history.

80% of IP trial group had irregular dietary habit history.

50% of OP and 65% of IP trial group had history of extensive NSAIDS usage.

9. FOOD HABITS. (Fig E)

Table 9 illustrates the distribution of diet among the patients.

TABLE 9

Sl. No.	Food habits	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Vegetarian diet	1	1	5	5
2.	Mixed diet	19	19	95	95

95% of both IP and OP trial group had mixed diet.

10. FAMIY HISTORY

Table 10 illustrates the distribution of family history.

TABLE 10

Sl. No.	Family History	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Positive	1	-	5	-
2.	Negative	19	20	95	100

No positive family history is observed in IP patients.

5% of OP patients had positive family history.

11. CLINICAL MANIFESTATION:

Table 11 illustrates the distribution of clinical manifestation

TABLE 11

Sl. No.	Symptoms	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Epigastric pain	20	20	100	100
2.	Indigestion	12	12	60	65
3.	Nausea	5	10	25	50
4.	Vomiting	2	4	10	20
5.	Loss of appetite	7	10	35	50
6.	Heart burn	17	18	85	90
7.	Abdominal discomfort	10	12	50	60
8.	Nocturnal pain	8	10	40	50
9.	Altered Bowel habits	5	6	25	30
10.	Weakness/Tiredness	2	4	10	20

Epigastric pain is present in 100% of both OP and IP trial group.

Indigestion is present in 60% of OP and 65% IP trial group.

Heart burn is present 85% of OP and 90% of IP trial group.

Nocturnal pain is present in 40% of OP and 50% of IP trial group.

Abdominal discomfort is present in 50% OP and 60% IP Trial Group.

12. MODE OF ONSET

Table 12 illustrates the distribution of Mode of onset of the disease.

TABLE 12

Sl. No.	Mode of onset	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Acute	3	1	15	5
2.	Gradual	17	19	85	95

Gradual onset is found in 85% OP trial group and 95% of IP trial group.

13. KOSAM

Table 13 illustrates the distribution of kosam.

TABLE 13

Sl. No.	Kosam	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Annamaya kosam	20	20	100	100
2.	Piraanamaya kosam	5	6	25	30
3.	Manomaya kosam	8	9	40	45
4.	Vingnanamaya Kosam	-	-	-	-
5.	Aananthamaya kosam	-	-	-	-

Annamayakosam was affected in 100% cases of both IP and OP trial group.

Piranamayakosam was affected in 25% of OP and 30% of IP trial group.

Manomayamkosam was affected in 40% of OP and 45% of IP trial group.

14. KANMENTHIRIYAM

Table 14 illustrates the distribution of disease with Kanmenthiriyam.

Table 14

Sl. No.	Kanmenthiriyam	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Kai	-	-	-	-
2.	Kaal	-	-	-	-
3.	Vai	-	-	-	-
4.	Eruvai	5	6	25	30
5.	Karuvai	-	-	-	-

Eruvai was affected in 25% of OP trial group and 30% IP trial group.

15. MUKKUTRAM

15.a Derangement of vatham.

Table 15.a illustrates the distribution of vatham.

Table 15. a

Sl. No.	Vatham	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Piraanan	5	6	25	30
2.	Abaanan	8	10	40	50
3.	Viyaanan	20	20	100	100
4.	Uthaanan	5	10	25	50
5.	Samaanan	20	20	100	100
6.	Naagan	-	-	-	-
7.	Koorman	-	-	-	-
8.	Kirukaran	5	8	25	40
9.	Devaththan	2	1	10	5
10.	Dhananjayan	-	-	-	-

Viyaanan was affected in 100% of both OP and IP trial groups.

Samanan was affected in 100% of both OP and IP trial groups.

15. b. Derangement of pitham.

Table15. b illustrates the distribution of pitham.

Table 15. b

Sl. No.	Pitham	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Analapitham	20	20	100	100
2.	Ranjagam	1	4	5	20
3.	Sathagam	-	-	-	-
4.	Prasagam	-	2	-	10
5.	Aalosagam	-	-	-	-

Analapitham was affected in 100% cases of both IP and OP trial groups.

15.c. Derangement of Kabam.

Table 15.c. illustrates the distribution of Kabam.

Table 15. c

Sl. No.	kabam	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Avalambagam	-	-	-	-
2.	Kiletham	20	20	100	100
3.	Pothagam	6	8	30	40
4.	Tharpagam	-	-	-	-
5.	Santhigam	-	-	-	-

Kiletham was affected in 100% of both OP and IP trial groups.

Pothagam was affected in 30% of OP and 40% of IP trial group.

16. Ezhu udal kattugal

Table 16. illustrates the distribution of derangement of ezhu udal kattugal.

Table 16

Sl. No.	Udal kattugal	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Saaram	20	20	100	100
2.	Senneer	1	4	5	20
3.	Oon	-	-	-	-
4.	Kozhuppu	-	-	-	-
5.	Enbu	-	-	-	-
6.	Moolai	-	-	-	-
7.	Sukkilam/suronitham	-	-	-	-

Saaram was affected in 100% of both IP and OP trial groups.

Senneer was affected in 5% of OP and 20% of IP group.

17. ENVAGAI THERVUAL

Table 17 illustrates the distribution of envagai thervugal.

Table 17

Sl. No.	Envagai thervugal	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Naadi (Thontha Naadi)	20	20	100	100
2.	Sparisam	20	20	100	100
3.	Naa	1	4	5	20
4.	Niram	1	2	5	10
5.	Mozhi	-	-	-	-
6.	Vizhi	1	4	5	20
7.	Malam	5	6	25	30
8.	Moothiram	-	-	-	-

Naadi was affected in 100% of IP and OP trial groups.

Sparisam was affected in 100% of IP and OP trial groups.

18. NEER KURI

Table 18 illustrates the distribution of Neer kuri.

Table 18

Sl. No.	Neer kuri	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Niram	-	-	-	-
2.	Manam	-	-	-	-
3.	Edai	-	-	-	-
4.	Nurai	1	-	5	-
5.	Enjal	-	-	-	-

Nurai was present in 5% of OP trial groups each.

19. NEI KURI

Table 19 illustrates the distribution of Nei kuri.

Table 19

Sl. No.	Nei Kuri	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Vatha Neer	12	12	60	60
2.	Pitha Neer	6	4	30	20
3.	Kaba Neer	-	-	-	-
4.	Thontha Neer	2	4	10	20

Pitha neer was found in 30% of OP trial group and 20% of IP trial group.

Vatha neer was found in 60% of OP trial group and IP trial group each.

20. EXAMINATION OF THE ABDOMEN

Table 20 illustrates the Examination of the abdomen.

Table 20

Sl. No.	Examination of the abdomen	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Epigastric tenderness	18	20	90	100
2.	Pointing sign	20	20	100	100
3.	Rigidity of Rectus abdominis	-	-	-	-
4.	Visible gastric peristalsis	-	-	-	-
5.	Palpable Mass	-	-	-	-

Epigastric tenderness was present in 90% OP and 100% of IP trial group.

Pointing sign was present in 100% of both OP and IP group.

21. Blood Grouping.(Fig F)

Table 21 illustrates the blood grouping

Table 21

Sl. No.	Blood Group & Rh type	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	O positive	13	11	65	55
2.	A_1 positive	1	0	5	-
3.	B positive	3	5	15	25
4.	A_1B Positive	3	4	15	20

65% OP trial group and 55% of IP trial group had O positive blood group.

22. GRADATION OF RESULTS. (Fig H)

Table 22 illustrates the Gradation of Results

Sl. No.	Gradation of Results	No. of cases		Percentage %	
		OP	IP	OP	IP
1.	Good Response	18	20	90	100
2.	Moderate Response	2	0	10	-
3.	Poor Response	-	-	-	-

In Op study 90% had good response and 10% had moderate response.

In IP study 100% had good response.

DISCUSSION

The entity selected for clinical trial ERIGUNMAM, as explained in the text YUGI VAIDHYA CHINTHAMANI-800 was supposed to indicate peptic ulcer disease with concerned symptoms.

The trial drug GUNMATHUKKU CHOORANAM was subjected to scientific analysis for its anti ulcer activity. The trial drug had fruitful results in preclinical studies.

In clinical study, 40 patients were selected for the study. Among them 20 were treated as out patients and 20 were inpatients. The study was carried out as a randomised clinical study under the supervision of Professor, Reader, Assistant Lecturer of Post Graduate Pothu Maruthuvam Department, Government Siddha Medical College, Palayamkottai. The study was carried out in the outpatient and inpatient ward of P.G Pothu Maruthuvam department of Government Siddha Medical College, Palayamkottai. Laboratory investigations were carried out in the concern department of Government Siddha Medical College, Palayamkottai. Upper GI- Endoscopy was performed at Aarthi Scans, Palayamkottai.

All of the patients were selected as per the selection proforma and seperate case sheets were maintained for all throughtout the course of study.

As per the observations the following results are postulated.

1. Sex variation:

In OP trial group male distribution was predominant contributing 65%. In IP trial group female distribution was predominant 60%.

2. Age:

Regarding age distribution of the disease in IP trial group, age group between 40 to 60 was predominating. 41 to 50 in 40% and 51 to 60 is 40%. In OP trial group age group between 30to 60 were predominating 31 to 40 is 20%, 41 to 50 is 35%, 51 to 60 is 20%.

3. KAALAM:

The observational results reveals that in OP trial group about 85% of the patients were belonging to pitha kalam between age 34 to 66. In IP trial group, about 90% patients were affected at pitha kaalam.

4. CONSTITUTION OF BODY:

From the IP trial group it was inferred that 55% of the patients affected were pitha thegi. In OP trial group 50% of the patients were pitha thegi. Hence pitha thegi patients were affected predominantly.

5. GUNAM:

Observations reveals that 100% of both IP and OP trial group had Rajo gunam.

6. RELIGION:

Hindu patients in IP trial group dominated the distribution 90% and also in OP trial group 80%.

7. SOCIO ECONOMIC STATUS:

In OP study, 60% of trial group belong to middle socio economic status.

In IP study the distribution was equal 50% each of poor and middle socio economic status.

8. AETIOLOGICAL FACTORS:

In OP study observations reveal 75% of trial group had irregular dietary habit and in IP study 80% of trial group had irregular dietary habit.

The second predominating aetiological factor is NSAIDS usage which was 50% in OP trial group and 65% in IP trial group.

9. FOOD HABITS:

Both IP and OP trial reveals 5% each group had vegetarian diet.95% of each group had mixed diet.

10. FAMILY HISTORY:

In OP trial group 5% patients had positive family history. In IP trial group no positive family history is reported .

11.

12.CLINICAL MANIFESTATIONS:

Epigastric pain was present in 100% of both IP and OP trial group.

Heart burn was present in 85% of IP and 90% of OP trial group.

13.MODE OF ONSET:

In OP trial group, 15% had Acute onset, 85% had gradual onset.

In IP trial group 5% had acute onset and 95% had gradual onset.

14.KOSAM:

In OP and IP study, annamayakosam was affected predominantly 100% each. Others like pirasamayakosam and manomayakosam were affected to a smaller extent**.**

15.KANMETHIRIYAM:

Eruvai is affected in 25% of OP trial group and 30% of IP trial group.

16.MUKKUTRAM:

16(a). Derangement of vatham:

Viyaanan was affected in 100% in OP and IP trial group. Viyaanan is affected due to epigastric pain.

16(b). Derangement of pitham:

Analapirtham was affected (digestion was affected) in 100% cases of both OP and IP trial group. Ranjagam and prasagan were affected to some extent.

16(c). Derangement of kabam:

Kiletham was affected in 100% cases of both OP and IP trial group. Pothagam (excessive salivation) is also affected to some extent in both the OP and IP trial groups.

17.CHANGES IN UDAL THATHUKKAL:

Saaram was affected (weakness) in 100% cases of both OP and IP trial group. Senneer was affected (due to anaemia) in 5% OP and 20% IP trial groups.

18.CHANGES IN ENVAGAI THERVUGAL:

In both OP and IP trial group 100% had affected Naadi. They had elevated levels of Vatham and Pitha in Naadi.

Sparisam was affected in 100% of both OP and IP trial groups. (Epigastric tenderness was present).

Naa was affected 5% in OP group and 20% of IP group. (Pallor tongue)

5% of OP and 10% of IP group had affected Niram (Pallor skin)

5% of OP and 20% of IP group had affected Vizhi (Paleness of conjuctiva).

25% of OP and 30% of IP trial group had affected malam (Constipation /diarrhea).

19.CHANGES IN NEER KURI:

5% of OP trial group had presence of nurai in urine (albuminuria).

20.CHANGES IN NEIKURI:

In OP study revealed Vatha neer pattern of neikuri in 60%. Pitha neer pattern in 30% and thontha neer pattern in 10%. In IP study, vatha neer pattern was found in 60% of the group, Pitha neer pattern was found in 20% of the group, Thontha neer pattern was found in 20% of the group.

Observation:

Hence, Erigunmam patients mostly has vatha neer pattern in neikuri.

Abdominal examination revealed 90% of cases OP group had epigastric tenderness 100% of cases of IP group had epigastric tenderness. Pointing sign is positive is 100% cases of both OP and IP trial group.

In OP trial group 90% of patients had good response and 10% had moderate response.

In IP trial group 100% of patients had good response.

21.POSITIVE FINDINGS ON EXAMINATION:

Tenderness of epigastric region was found in 95% of cases and pointing sign present in 100% cases of trial group.

22. SIGNIFICANCE OF BLOOD GROUPING:

- 60% of the total trial group had O+ve blood group.
- 20% of the total trial group had B+ve blood group.
- 17.5% of the total trial group had A,B+ve blood group.
- 2.5% of the total trial group had A+ve blood group.

23. UGI – ENDOSCOPE:

Upper GI – Endoscopy was done in 1 IP patient and 4 OP patient and confirmed to have ulcer in GIT. (Annexure – II).

24. BIOCHEMICAL ANALYSIS OF TRIAL DRUG:

Biochemical analysis of trial drug showed the presence of calcium, sulphate, starch, chloride, ferrous iron, phosphate(AnnexureIII).

25. PHARMACOLOGICAL ANALYSIS OF TRIAL DRUG:

Pharmacological analysis revealed that the trial drug GUNMATHUKKU CHOORANAM had **significant anti-ulcer activity** and significant **antispasmodic action**(AnnexureIV).

The symptoms of **erigunmam** as described by **Yugi vaidhya chinthami-800** well resembled the symptoms in peptic ulcer disease as described in modern texts. The aetiological factors of erigunmam were more elaborate in our literature rather than that in modern text which has to be subjected to a scientific evaluation.

Regarding envagai thervugal, Naadi in erigunmam patients is observed as increase in vatham and pitham parts. This was well brought to normal levels at the end of the trial.

It is also observed that the haemoglobin content of the selected individuals was increased at a range of 0-1 gm. of their existed level during the course of the trial.

It was observed that in some patients who had increased sour taste in their diet suffered from giddiness. And adviced to withdraw sour taste in the diet and found out to be relieved from the giddiness.

The selected subjects were adviced to have regular diet, to avoid alcohol, coffee, tea, oily food, to avoid smoking.

The trial medicine **Gunmathukku chooranam has kaarppu and thuvarppu suvai** as dealt in our literatures.

The literature describes the properties and actions of kaarppu suvai as

"குட்டங் கொண்டவூண் சட்டமாய் **செரியாக்**
கெட்ட **உப்பிசம்** துட்ட சோகை
நீக்கும் **புண்களைப் போக்கும்**"

- (ம.த.பா)

"**நற்பசி** யூக்கி நவைகளைப் போக்கிநா
விற்கசி வாக்கிச் சுவையறி விற்பன்ன
ராக்கி **யூண்சீரணம்** தாக்கியாங் கார்ப்பைச்சீர்
தூக்கியயில் வோர்க்குச் சொல்"

Thuvarppu suvai is described to have

"கட்டுவது சற்றுக் கரகரப் பாக்குவது"

"குருதி சுத்தி யாக்கும்

கொடிய பித்தம் போக்கும்

பொருதும் **புண்ணை யாற்றும்"**

Hence trial drug possess activities of relieving flatulence, abdominal distension, indigestion, normalizing acid secretion, ulcer healing, appetizing actions.

It is inferred from the analysis that iron contented in the trial drug has not produced abdominal discomfort or any irritation which normally occurs, despite iron absorption is enhanced in the trial subjects.

SUMMARY

Erigunmam was analysed elaborately in its aetiological, pathophysiological symptomatical views both literally and scientifically. Resemblances among erigunmam and peptic ulcer diseases were pointed out through literary reviews and confirmed that erigunmam can be very well correlated with peptic ulcer disease.

The trial drug was selected from Gunapadam Mooligai vaguppu and prepared in traditional way as said in the literatures. The trial drug was subjected to preclinical studies and then used for the clinical study.

40 patients of both sexes were diagnosed to have erigunmam using both siddha and modern parameters. Among them 20 patients were treated in out patient ward and 20 patients were treated in inpatient ward.

All of the patients were subjected to both physical examinations and laboratory investigations. Physical examination was carried out with the help of envagai thervugal. Laboratory investigations were made in the study place and also in private clinical pathology laboratories. Trial drug Gunmathukku chooranam was administered 2 gms two times a day with water before food. No complications or adverse effects are observed during the study period.

The observations were tabulated. The study reveals that male population (52.5%) is more prone to develop erigunmam. Likely female population is also increasingly affected. Socio economic status plays a

considerable role in developing erigunmam. Dietary factors, O blood group, excessive smoking, excessive usage of NSAIDS contribute to majority of causing erigunmam.

Along with dietary management, proper and continous intake of the trial drug Gunmathukku chooranam gave good improvement in the trial patients. The symptoms of erigunmam relieved completely at the end of the trial.

Meditation and Yogasanas were taught to the trial patients and proper diet is adviced.

Scientific evaluation revealed Gunmathukku chooranam have effective antiulcer property and it plays effective role in management of erigunmam.

CONCLUSION

- The trial group had good prognosis at the end of the treatment course.
- The trial medicine **Gunmathukku chooranam** yielded promising results in managing **erigunmam.**
- The trial drug posses **alkaline pH(9.0)(ANNEXUREIII).**
- The probable mode of action of Gunmathukku chooranam on erigunmam could be due to its alkaline pH.
- Gunmathukku chooranam has **significant antispasmodic activity** and **anti ulcer activity(annexureIV).**
- Literary evidences reveals **kaarppu** and **thuvarppu** suvai**(annexureI**) has significant action on the disease of Gastrointestinal tract.
- In peptic ulcer disease, there would be a spasm in the smooth muscles probably because of this similar feature under the term gunmam might have been included in our classics.
- In order to design a drug which could act on the above stated condition our siddhars might have studied in depth and made it possible by their high intuitive powers. This shows their high scientific and rational thinking.
- Marketing the trial drug will do favour in economical issues and patient palatability.

ANNEXURE I

DRUG REVIEW

The selected trial drug is Gunmathukku chooranam from the reference book Gunapadam mooligai vaguppu pg.no.:

MATERIALS AND METHOD:

The raw drugs used are

1. Piper nigrum (**milagu**)
2. Pimpinella anisum (**sombu**)
3. Achyranthes aspera **(nayuruvi**)
4. Ferrousoferric oxide (iron rust, impure of iron) (**mandooram**).

PREPARATION OF GUNMATHUKKU CHOORANAM:

(1) Piper nigrum seeds were roasted slightly and powdered,

(2) Pimpinella anisum seeds were roasted slightly for purification and powdered.

(3) Achyranthes aspera is collected as whole plant and dried and burnt into ashes. The ash is collected.

(4) Ferrouso ferric oxide is subjected to oxidation(**செந்தூரமாக்கல்**) and the process is carried out in traditional way as said in literature (Gunapadam Thathu Vaguppu Pg.No.:198)

Then all the end products of (1), (2), (3) and (4) are taken equal quantity and mixed well.

(1) PIPER NIGRUM:

Family	:	Piperaceae
Common Name	:	Milagu (Tamil)
		Black pepper (English)
Parts used	:	Seeds
Suvai	:	Kaippu, Kaarppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Actions:

Carminative, stimulant, Antidote, antivadha, anti-tumourogenic, anticholesterolemic.

Chemical constituents:

Piperine, coumaperine, β-sitosterol, piperic acid, pinene, sesqueterpine.

Medicinal Uses:-

"கோணுகின்ற பக்கவலி குய்யவுரோ கம்வாத
சோணிதங்க ழுத்திற்குள் தோன்றுநோய் - காணரிய
காதுநோய் மாதர்**குன்மங்** காமாலை மந்தமென்றீர்
ஏதுநோய் காயிருக்கில் ரூங்கு.

- தேரையர் குணவாகடம்

Piper nigrum is used to inhibit the gastric acid secretion or to boost the mucous defense.

-ncbi.com

(2) PIMPINELLA ANISUM:-

Family : Apiaceae

Common Name : Anise, Aniseed(English)

Sombu (Tamil)

Parts Used : Flower, seed, root

Suvai : Kaarppu, Inippu

Thanmai : Veppam

Pirivu : Kaarppu

Actions: Carminative, stomachic

Chemical Constituents: Estragol, anethole, Flavanoid, methyl carvicol, furano coumarins, sesquiterpenes.

Medicinal Uses:

"யோனிநோய் **குன்மம்** உரூட்சைமந் தம்பொருமல்
பேனமுறு காசம் பீலிகமிரைப் - பீனஉரை
சேர்க்கின்ற வாதமுபோஞ் சீர்பெரிய சீரகத்தால்
மூக்குநொ யில்லை மொழி"

-ஆகத்தியர் குணவாகடம்

Aniseed alcoholic extracts exerted a relaxing effect on in vitro pre-contractedsmooth muscles from different organs(tracheal and ileal) by antagonising several contraction inducing agents.

-London:12 June 2008

Doc.Ref.:EMEA/HMPC/137421/2006

(3) ACHYRANTHES ASPERA:

Family	:Amaranthaceae
Common Name	:Devil's horse worship(English)
	Nayuruvi (Tamil)
Parts Used	:Whole Plant
Suvai	:Kaippu, Thuvarppu, Kaarppu
Thanmai	:Veppam
Pirivu	:Kaarppu

Actions: Astringent, diuretic, alterative

Chemical constituents: Oleanolic acid, oleanoic acid, achyranthine, saponins A and B, eugenol, phytosterol.

Medicinal Uses:

"மலிகாரங் கைப்புள்ள அபமார்க்கி யின்வேரால்வசிய முண்டாம்
இலைமுல உதிரமந்தம் பேதிகபம் வியர்வுதந்தி யிறங்பு மேகம்
மலையேறும் படிபுரிய முள்ளரிசி **பசிமாற்றும்** வனசமுலம்
பலமாதர்க் குள்ளழுக்கை நீக்குவங்கச் சிந்தூரம் பண்ணுமாதோ

- தேரன் குணவாசடம்

Saponins A and B, free oleanolic acid are most active ones. They have antifungal, anto-oedematic, **anti-ulcerogenic**, anti-inflamatory, **anti-diarrhoeic actions.**

- Achyranthes aspera I doc Erstelltmit der pdf

(4)Ferrousoferric Oxide:-

Commonly - Impure iron rust.

Suvai - Thuvarrpu

Veeriyam - Veppam

Ferrousoferric oxide is a black magnetic iron oxide Fe3O4 found in nature as magnetite, also obtained synthetically (from iron by heating in steam or from a ferrous salt and an alkali by precipitation and oxidation).

Actions:

Alterative, Haematinic, Tonic, Stomachic.

Medicinal Used:

"சிட்டமொன்றாற் சோபை கிளைவீக்க மத்திசுரத்

துட்டவிட பாகஞ் சுவாசமையங் - கெட்டகொடும்

பாண்டிருமல் நீராமை பாழும் பிரமியமுன்

தாண்டிவிடு முண்டிரத்த தாது"

ANNEXURE II

ENDOSCOPIC FINDINGS

S.No	Name	Age/Sex	Impression for UGI Endoscopy
1.	Mrs.Petchiammal	60/F	Moderate pangastritis and bulbar ulcers
2.	Mr.Benni	46/M	Grade II distal esophagitis moderate antral gastritis
3.	Mr.Velmurugan	35/M	Grade II Distal esophagitis severe erosive pangastritis
4.	Mrs. Shanthi	50/F	Grade II Distal esophagitis, moderate antral gastritis.Active gastric ulcer
5.	Mr.Sudalaimuthu	65/M	Grade II Distal esophagitis ,moderate Antral Gastritis. Pyloric canal ulcers
6.	Mr.Muthukumar	51/M	Grade II distal esophagitis, severe pangastritis, active Duodenal Ulcer forrest III

ANNEXURE III

BIO CHEMICAL ANALYSIS

OF

GUNMATHUKKU CHOORANAM

Preparation of the Extract:

5gms of the drug was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water was added to it and dissolved well. Then it was boiled well for about 10 minutes. It is cooled and filtered in a 100ml volumetric flask and then it is make up to 100ml with distilled water. This fluid was taken for analysis.

Qualitative Analysis:

Sl.No.	Experiment	Observation	Inference
1	**TEST FOR CALCIUM:** 2ml of the above prepared extract is taken in a clean test tube. 2ml of 4% Ammonium oxalate solution is added to it.	A white precipitate is formed	It indicates the presence of Calcium
2	**TEST FOR SULPHATE:** 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	It indicates the presence of Sulphate
3	**TEST FOR CHLORIDE:** The extract is treated with silver nitrate solution.	A white precipitate is formed	It indicates the presence of Chloride

4	**TEST FOR CARBONATE:** The substance is treated with concentrated HCL.	No brisk effervessence is formed	Absence of Carbonate
5	**TEST FOR STARCH:** The extract is added with weak iodine solution.	Blue colour is formed	Presence of Starch
6	**TEST FOR IRON FERRIC:** The extract is treated with glacial acetic acid and potassium ferro cyanide**.**	No blue colour is formed	Absence of Ferric iron.
7	**TEST OF IRON FERROUS:** The extract is treated with concentrated nitric acid and ammonium thio cyanate.	Blood red colour is formed	Indicates the presence of Ferrous iron
8	**TEST FOR PHOSPHATE:** The extract is treated with AmmoniumMolybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of Phosphate
9	**TEST FOR ALBUMIN:** The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of Albumin.
10.	**TEST FOR TANNIC ACID:** The extract is treated with ferric chloride.	No blue black precipitate is formed	Indicates the Absence of Tannic acid

11	**TEST FOR UNSATURATION:** Potassium permanganate solution is added to the extract**.**	It gets decolourised	Indicates the presence of Unsaturated compound
12	**TEST FOR THE REDUCING SUGAR:** 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs	Absence of Reducing sugar
13	**TEST FOR AMINO ACIDS:** One (or) two drops of the extract is placed on a filter **paper and** dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried well.	No violet colour is formed	Indicates the Absence of Amino acid.
14	**TEST FOR ZINC:** The extract is treated with potassium Ferrocyanide**.**	No white precipitate is formed	Absence of zinc

pH of Gunmathuku Chooranam is 9.0 (Alkaline)

ANNEXURE IV

PHARMACOLOGICAL ANALYSIS

(a) Anti Ulcer Activity of the Gunmathukku Chooranam

Aim

To study the anti ulcer activity of the **Gunmathukku chooranam** by **Pyloric ligation method**.

Instruments

Syringe, Needles, scissors, forceps, cork board, 10 ml pipette, 500 ml volumetric flask, suturing thread, medicine.

Preparation of the test medicine

1 gm of the Gunmathukku Chooranam was dissolved in 10 ml of water. 1 ml contains 100 mgs.

Procedure

Six adult female albino rat weighing 100 gms each were taken. It was fasted for about 48 hours. Then the abdomen was opened under the ether anesthesia and the pylorus of the stomach was ligated. At the time of ligation 2 rats were given 2 ml of the prepared test medicine solution directly into the stomach, another 2 rats were given distilled water at the same dose in the same manner. The incision was closed and the rats were allowed to recover. Then they were sacrificed 18 hours after the pylorus ligation and the stomach contents were collected. The stomach was opened by cutting along the greater curvature and mounted on a moist

cork board. The ulcers were examined and graded as follows. The free acid, and total acid level of gastric juice were also analysed by using 0.01N Sodium hydroxide with **Toffer's reagent** as indicator.

The results of the above experiments are shown in the table. Effects of **Gunmathukku Chooranam** on gastric acid secretion are as follows.

Sl. No	**Name of medicine /groups.**	**Dose / 100 gm body weight.**	**Volume of gastric secretion.**	**Free HCL in units.**	**Total HCL in units .**	**Degree of ulceration.**
1	Control (water)	1 ml	7 ml	87	205	100%
2	Standard (Ranitidine)	20 mg/1 ml	8 ml	10	20	5%
3	Medicine (Gunmathukku Chooranam)	100 mg/1 ml	4.5 ml	52	95	20%

Ulcer grades

0 Grade – Normal.

I Grade – Scattered haemorrhagic spots.

II Grade – Deeper haemorrhagic spots.

III Grade – Hemorrhagic spots and ulcers.

IV Grade – Restoration spots and ulcers.

Inference

From the above tabulation the degree of ulceration has shown in the photographs. We came to know that the medicine Gunmathukku Chooranam protects the gastric mucosa by neutralizing the excessive gastric acid and the **Gunmathukku Chooranam** has got a **significant anti ulcer** activity.

(b) Anti Spasmodic effect on "Gunmathukku Chooranam"

Aim

To study the Anti Spasmodic effect on "Gunmathukku Chooranam".

Preparation of the trial medicine

1 gm of the Gunmathukku Choornam was dissolved in 10 ml of water. 1 ml contains 100 mgs.

Procedure

A rabbit weighing about 350 gm was starved for 48 hours and only water is given.

It was killed by stunning with a sharp blow on the head and cutting its throat to bleed to death. The abdomen was quickly opened and the viscera inspected and loops of intestine identified using the patch as a landmark. Then the ileum was removed and placed in a shallow dish containing warm tyrode solution ($37^{o}C$) and continuously aerated. The contents of the lumen of the ileum were washed and utmost care was taken to avoid any damage. It was cut into segments of 4 cm in a fully relaxed state and sutures were made with needle and tied on either side and the segment was suspended in an isolated organ bath. It was aerated by an oxygen tube immersed in tyrode solution. Drugs were given to study the inhibitory effect of acetyl choline.

Inference

The test drug **"Gunmathukku Chooranam"** had **more significant antispasmodic effect**.

C. ANTI – HISTAMINIC ACTIVITY ON GUNMATHUKKU CHOORANAM

Aim

To study the anti-histaminic effect of Gunmathukku Choornam.

Preparation of the Trail Medicine

1 gm of Gunmathukku Choornam was taken and mixed with 10 ml of water and filtered.

Procedure

A guinea pig weighing about 350 gm was starvated for 48 hours and only water is allowed.

It was killed by stunning with a sharp blow on the head and cutting its throat to bleed to death. The abdomen was quickly opened and the vicera inspected and loops of the intestine identified using the patch as a landmark. Then the ileum was removed and placed in a shallow dish containing warm tyrode solution (30^0C) and continuously aerated. The contents of the lumen of the ileum were washed and utmost care was taken to avoid any damage. It was cut in to segments of 4 cm in a fully relaxed state and sutures were made with needle and tied on either side and the segment was suspended in an isolated organ bath .It was aerated by an oxygen tube immersed in tyrode solution. Drugs were given to study the inhibitory effect of histamine induced contractions.

Inference

The test drug **Gunmathukku Choornam** had **Moderate** effect.

ANNEXURE - V

PROFORMA OF CASE SHEET

GOVERNMENT SIDDHA MEDICAL COLLEGE AND HOSPITAL

DEPARTMENT OF POST GRADUATE POTHU MARUTHUVAM

PALAYAMKOTTAI - TIRUNELVELI - 627002

CASE SHEET PROFORMA FOR "ERI GUNMAM" – O.P

Case No	:	Occupation	:
O.P. No	:	Income	:
Name	:	Treatment Starting Date	:
Age/sex	:	End of the Treatment Date	:
Address	:	Total No.of Days Treated	:
		Result : **Good response/Moderate response/Poor response**	
Nationality	:	Diagnosis : "**Eri Gunmam**"	
Religion	:	Medical Officer	:

Complaints and Duration

1. Pain :
    a. Epigastric region :
    b. Rt hypochondrium :
2. Indigestion :
3. Flatulence :
4. Nausea :
5. Vomiting :
6. Heart burn :
7. Belching :
8. Loss of appetite :
9. Diarrhoea :
10. Constitpation :

11.Insomnia :

12.Abdominal Discomfort :

13.Weakness :

14.Nocturnal Pain :

15.Other symptoms :

DURATION OF ILLNESS

PAST HISTORY

GENERAL EXAMINATION

Consiousness	:	Temperature	:
Decubitus	:	Pulse rate	:
Nutrition	:	Heart rate	:
Anaemia	:	Respiratory rate	:
Cyanosis	:	Blood Pressure	:
Jaundice	:		
JVP	:		
Pedal oedema	:		
Lymphadenopathy	:		
Koilonychia	:		
Clubbing	:		

ENVAGAI THERVUGAL

Naadi :

Sparisam :

Naa :

Niram :

Mozhi :

Vizhi :

Malam :

Moothiram :

a) Neerkuri :

i. Niram :

ii. Manam :

iii. Edai :

iv. Nurai :

v. Enjal :

b) Neikuri :

EXAMINATION OF ABDOMEN

Inspection :

Palpation :

Percussion :

Auscultation :

RELEVANT OTHER SYSTEMIC EXAMINATION

- Cardio Vascular system :
- Respiratory system :
- Central Nervous system :

LAB INVESTIGATION

Blood:		**BT**	**AT**
TC :			
DC :	P:		
	L:		
	E:		
ESR ½ hr / 1 hr			
Hb:			
Blood Sugar (R):			
Blood Urea :			
Serum Cholesterol:			
Urine :			
Albumin :			
Sugar :			
Deposit :			
Motion:			
Ova :			
Cyst :			
Occult Blood :			
Blood Group :			

OTHER INVESTIGATIONS

UGI Endoscopy :

TREATMENT

No	Medicine	Dose	Adjuvant
1	Gunmathukku Chooranam	2 gms.B.D	Water

DIET

தவிர்க்க வேண்டியவை

- காரமான உணவுப்பொருட்கள்.
- மிகுதியும் சூடான உணவுப் பொருட்கள்.
- புளிப்பான பழங்கள், உணவுப்பொருட்கள்.
- வாயு பதார்த்தங்கள்.
- பீடி, சிகரெட், மதுபானம், தேநீர், புகையிலை, சுருட்டு, பொடி போடுதல்.

சேர்க்க வேண்டியவை

- எளிதில் செரிக்கக் கூடிய உணவுப் பொருட்கள்.
- கீரை வகைகள் முக்கியமாக மணத்தக்காளி கீரை.
- பச்சை காய்கறிகள்.

மருத்துவ அறிவுரை

- பட்டினியிருத்தல் கூடாது.
- அதிகமாக கோபப்படுதல், கவலைபடுதல் கூடாது.
- தரப்பட்ட மருந்தினை தவறாது உட்கொள்ள வேண்டும்.
- காலந்தவறாது உணவு உட்கொள்ள வேண்டும்.

GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL

PALAYAMKOTTAI

DEPARTMENT OF POST GRADUATE – POTHU MARUTHUVAM

CASE SHEET PROFORMA FOR "ERI GUNMAM" – (IP)

Ward :	Nationality :
I.P. No :	Religion :
Bed No :	Date of admission :
Name :	Date of discharge :
Age/Sex :	Result : **Good response/Moderate response/Poor response**
Address :	Diagnosis : '**ERI GUNMAM'**
	Medical officer :

Occupation:

Income :

Complaints and Duration

History of Present Illness

History of Past Illness

Personal History

Family History

Habits

Veg / Non- veg / Mixed diet / irregular diet /

Smoker / Alcoholic / Tobacco – Chewer.

GENERAL EXAMINATION

Consciousness	:	**VITAL SIGNS**	
Decubitus	:	Temperature	:
Nutrition	:	Pulse Rate	:
Anaemia	:	Heart Rate	:
Cyanosis	:	Respiratory Rate	:
Jaundice	:	Blood Pressure	:
JVP	:		
Pedal Oedema	:		
Lymphadenopathy	:		
Koilonychia	:		
Clubbing	:		

IN SIDDHA ASPECTS

MUKKUNAM	**THEGI**
Sathuvam :	Vatham :
Rajogunam :	Pitham :
Thamogunam:	Kabam :
	Thontham:

IMPORIGAL & IMPULANGAL

Mei :

Vai :

Kann :

Mookku:

Sevi :

KANMENTHIRIYAM & KANMAVIDAYAM

Kai :

Kal :

Vai :

Eruvai:

Karuvai:

KOSAM

Annamayakosam:

(Ezhu udal kattugal)

Praanamayakosam:

(Praanan & Kanmenthiriyam)

Manomayakosam:

(Manam & Gnanenthiriyam)

Gnanamayakosam :

(Puththi & Gnanenthiriyam)

Aananthamayakosam:

(Praanan & Suluthi)

UYIR THATHUKKAL

VATHAM

Praanan :

Abaanan :

Viyaanan :

Uthaanan :

Samaanan :

Nagan :

Koorman :

Kirugaran :

Devathathan:

Dhananjayan:

PITHAM

Analapitham :

Ranjagam :

Sathagam :

Alosagam :

Prasagam :

KABAM

Avalambagam:

Kiletham :

Tharpagam :

Pothagam :

Santhigam :

UDAL KATTUGAL

Saram:

Senneer :

Oon :

Kozhuppu :

Enbu :

Moolai :

Sukkilam / Suronitham:

ENVAGAI THERVUGAL

Naadi :

Sparisam :

Naa :

Niram :

Mozhi :

Vizhi :

Malam :

Moothiram :

(a) Neerkuri

1. Niram :
2. Manam :
3. Edai :
4. Nurai :
5. Engal :

(b) Neikuri

IN MODERN ASPECTS

SYSTEMIC EXAMINATION

1. Cardio Vascular System :
2. Respiratory System :
3. Central Nervous System :

ANY OTHER ASSOCIATED DISEASE WITH SPECIAL REFERENCE TO

- Cirrhosis
- Chronic Renal failure
- Hyper Parathyrodism
- Renal Stones
- Chronic Pancreatitis.

ALIMENTARY SYSTEM

SYMPTOMS AND SIGNS

Symptoms	Before Treatment	Duration	After Treatment Days				
			7th	14th	21st	28th	35th
I.PAIN : RELATED TO FOOD							
A. Any Gastric discomfort 1. Before Meals 2. 1-2 hrs after meals 3. 2-4 hrs after meals 4. Constant							
B. Pain Occational 1. Before Meals 2. 1-2 hrs after meals 3. 2-4 hrs after meals 4. Constant							
C. Burning Sensation 1. Before Meals 2. 1-2 hrs after meals 3. 2-4 hrs after meals 4. Constant							
D. Radiation of Pain 1. No Radiation 2. Left shoulder 3. Back 4. Sides of chest							

E. Pain Nocturnal 1. 10 – 12 pm 2. 1 – 3 pm 3. 2 – 4 am							
F. Pain relieved by 1. Food 2. Antacids 3. Bed rest 4. Siddha drugs 5. Vomiting 6. Not relieved by any of the above.							
G. Nausea 1. Frequent: 2. Occational 3. Associated with Vomiting							
H. Vomiting 1. Frequent 2. Occational 3. Stained with blood							
II. HEART BURN 1. Occational 2. Constant 3. Before Meals 4. After and Before Meals							

III. EXCESSIVE SALIVATION 1. Occational 2. With or between meals 3. Often 4. Constant							
IV. APPETITE 1. Very poor 2. Moderate 3. Normal							

SIGNS

EXAMINATION OF ABDOMEN

- Inspection:
- Palpation:
- Percussion:
- Auscultation:

LAB INVESTIGATION

Blood:		**BT**	**AT**
TC :			
DC :	P:		
	L:		
	E:		
ESR ½ hr / 1 hr			
Hb:			
Blood Sugar (R):			
Blood Urea :			
Serum Cholesterol:			
Serum creatinine:			
Urine :			
Albumin :			
Sugar :			
Deposit :			
Motion:			
Ova :			
Cyst :			
Occult Blood :			
Blood Group :			

OTHER INVESTIGATIONS

UGI Endoscopy :

TREATMENT

No	Medicine	Dose	Adjuvant
1	Gunmathukku Chooranam	2 gms.B.D	Water

DIET

தவிர்க்க வேண்டியவை

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- பீடி, சிகரெட், மதுபானம், தேநீர், புகையிலை, சுருட்டு, பொடி போடுதல்.

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- பச்சை காய்கறிகள்.

மருத்துவ அறிவுரை

- பட்டினியிருத்தல் கூடாது.
- அதிகமாக கோபப்படுதல், கவலைபடுதல் கூடாது.
- தரப்பட்ட மருந்தினை தவறாது உட்கொள்ள வேண்டும்.
- காலந்தவறாது உணவு உட்கொள்ள வேண்டும்.

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BLOOD INVESTIGATIONS REPORT - IP

S.No	IP.No	Before Treatment					After Treatment					Blood Group
		Sugar	Bilirubin	Urea	Creatinine	Cholesterol	Sugar	Bilirubin	Urea	Creatinine	Cholesterol	
1	2215	124	0.8	24	0.9	251	107	0.8	20	0.9	240	O +ve
2	2514	82	0.6	30	0.9	238	80	0.6	30	0.9	220	O +ve
3	2795	120	0.7	23	0.8	130	117	0.7	24	0.8	170	O +ve
4	2803	102	0.7	19	0.8	211	104	0.7	19	0.8	200	B +ve
5	2813	64	0.6	12	0.9	198	70	0.6	12	0.9	200	A1B +ve
6	3100	127	0.7	49	0.9	184	120	0.6	48	0.8	180	O +ve
7	3162	142	0.8	28	0.6	151	120	0.6	24	0.9	132	B +ve
8	3311	76	0.8	18	1	188	80	0.8	20	0.9	180	A1B +ve
9	3515	110	0.8	23	0.6	180	107	0.8	20	0.8	160	O +ve
10	3556	116	0.7	39	0.9	172	117	0.7	35	0.9	170	B +ve
11	3564	103	0.6	32	0.6	200	100	0.6	32	0.7	190	O +ve
12	3578	68	0.6	17	0.6	240	74	0.6	24	0.6	200	O +ve
13	3650	187	0.9	21	0.6	230	160	0.6	20	0.6	200	A1B +ve
14	3668	70	0.7	32	0.7	180	74	0.6	28	0.7	174	A1B +ve
15	3669	123	0.6	38	0.6	170	120	0.6	34	0.6	170	B +ve
16	3670	114	0.8	22	0.9	183	100	0.8	28	0.9	180	B +ve
17	3721	68	0.8	24	0.9	170	70	0.8	24	0.9	168	O +ve
18	3748	100	0.8	27	0.8	200	96	0.8	25	0.8	190	O +ve
19	3766	110	0.8	34	1	190	106	0.8	26	0.9	190	O +ve
20	3778	130	0.7	20	0.9	170	120	0.7	20	0.9	175	O +ve

BLOOD INVESTIGATIONS REPORT -OP

S.No	OP.No	Before Treatment					After Treatment					Blood Group
		Sugar	Bilirubin	Urea	Creatinine	Cholesterol	Sugar	Bilirubin	Urea	Creatinine	Cholesterol	
1	49611	200	0.8	24	0.9	263	159	0.8	24	0.9	220	B +ve
2	50604	92	0.7	26	0.9	289	100	0.7	24	0.9	260	O +ve
3	51264	94	0.7	20	0.8	142	148	0.7	12	0.8	150	A1 +ve
4	52927	118	0.77	30	0.8	174	120	0.7	28	0.8	150	B +ve
5	53336	86	0.8	29	0.7	181	88	0.8	32	0.7	170	A1B +ve
6	55882	230	0.6	24	0.9	200	182	0.6	28	0.9	200	O +ve
7	55250	78	0.8	28	0.9	200	80	0.8	30	0.9	200	O +ve
8	57225	87	0.9	36	1.1	212	87	0.9	32	1	200	O +ve
9	54674	100	0.8	25	0.8	143	110	0.8	25	0.8	142	O +ve
10	58130	197	0.6	28	0.8	213	180	0.6	30	0.8	213	O +ve
11	59363	87	0.8	30	0.9	140	90	0.8	28	0.9	140	O +ve
12	60324	80	0.6	25	0.9	160	88	0.6	25	0.9	163	O +ve
13	61335	99	0.8	33	0.9	180	100	0.8	30	0.9	180	A1B +ve
14	62073	97	0.6	19	0.8	200	90	0.6	24	0.8	190	O +ve
15	62079	103	0.8	18	0.9	180	100	0.8	20	0.9	180	O +ve
16	62132	77	0.8	13	0.9	140	80	0.8	20	0.9	144	O +ve
17	62383	130	0.8	25	0.9	260	104	0.9	21	0.9	241	O +ve
18	62398	118	0.8	29	0.8	220	106	0.8	24	0.8	200	B +ve
19	65414	80	0.6	18	0.8	212	80	0.6	20	0.8	200	A1B +ve
20	68894	89	0.8	33	1	187	80	0.8	30	0.9	180	O +ve

BLOOD INVESTIGATIONS REPORT - IP

S.No	IP.No	Before Treatment					After Treatment					Blood Group
		Sugar	Bilirubin	Urea	Creatinine	Cholesterol	Sugar	Bilirubin	Urea	Creatinine	Cholesterol	
1	2215	124	0.8	24	0.9	251	107	0.8	20	0.9	240	O +ve
2	2514	82	0.6	30	0.9	238	80	0.6	30	0.9	220	O +ve
3	2795	120	0.7	23	0.8	130	117	0.7	24	0.8	170	O +ve
4	2803	102	0.7	19	0.8	211	104	0.7	19	0.8	200	B +ve
5	2813	64	0.6	12	0.9	198	70	0.6	12	0.9	200	A1B +ve
6	3100	127	0.7	49	0.9	184	120	0.6	48	0.8	180	O +ve
7	3162	142	0.8	28	0.6	151	120	0.6	24	0.9	132	B +ve
8	3311	76	0.8	18	1	188	80	0.8	20	0.9	180	A1B +ve
9	3515	110	0.8	23	0.6	180	107	0.8	20	0.8	160	O +ve
10	3556	116	0.7	39	0.9	172	117	0.7	35	0.9	170	B +ve
11	3564	103	0.6	32	0.6	200	100	0.6	32	0.7	190	O +ve
12	3578	68	0.6	17	0.6	240	74	0.6	24	0.6	200	O +ve
13	3650	187	0.9	21	0.6	230	160	0.6	20	0.6	200	A1B +ve
14	3668	70	0.7	32	0.7	180	74	0.6	28	0.7	174	A1B +ve
15	3669	123	0.6	38	0.6	170	120	0.6	34	0.6	170	B +ve
16	3670	114	0.8	22	0.9	183	100	0.8	28	0.9	180	B +ve
17	3721	68	0.8	24	0.9	170	70	0.8	24	0.9	168	O +ve
18	3748	100	0.8	27	0.8	200	96	0.8	25	0.8	190	O +ve
19	3766	110	0.8	34	1	190	106	0.8	26	0.9	190	O +ve
20	3778	130	0.7	20	0.9	170	120	0.7	20	0.9	175	O +ve

TABLE - VI

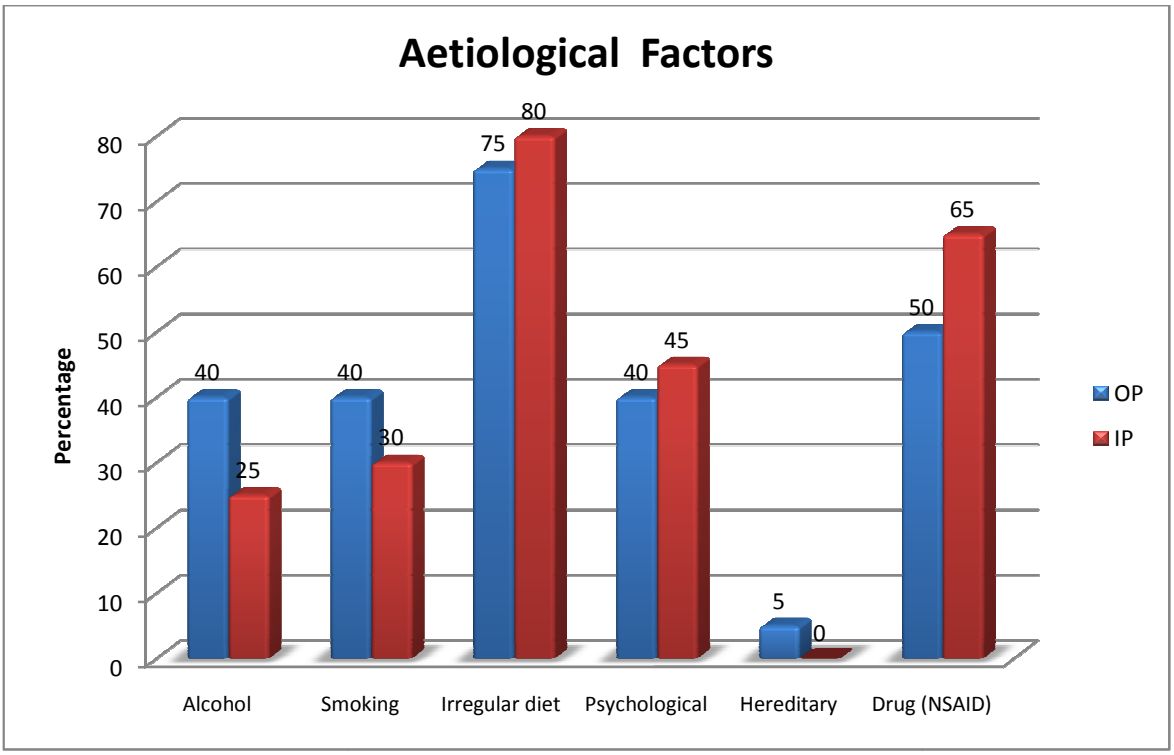
S.No	IP.No	Blood investigation														Urine Analysis						Stools Examination			
		Before treatment							After treatment							Before treatment			After treatment			Before treatment		After treatment	
		TC Cells/Cumm	DC %			ESR mm hrs		Hb%	TC Cells/Cumm	DC %			ESR mm hrs		Hb%	Alb	Sug	Dep	Alb	Sug	Dep	Ova cyst	Occult blood	Ova cyst	Occult blood
			P	L	E	1/2 hr	1 hr			P	L	E	1/2 hr	1 hr											
1	49611	8900	68	27	5	6	13	11	7400	59	37	4	5	10	12	Nil	+	1-4 epi cells	Nil	Nil	NIL	Nil	- ve	Nil	- ve
2	50604	8100	58	40	2	10	23	10.5	8000	60	38	2	5	10	11.5	Nil	Nil	Nil	Nil	Nil	NIL	Nil	- ve	Nil	- ve
3	51264	9900	57	40	3	3	7	10.8	9000	56	40	4	3	7	10.8	Nil	Nil	1-2 pus	Nil	Nil	1-2 pus	Nil	- ve	Nil	- ve
4	52927	8300	52	45	3	12	28	11.5	8100	58	40	2	10	12	11.5	Nil	Nil	1-3 epi	Nil	Nil	NIL	Nil	- ve	Nil	- ve
5	53336	9000	64	34	2	2	4	12.5	9000	64	32	4	1	3	13.5	Nil	Nil	1-2 pus	Nil	Nil	few pus	Nil	- ve	Nil	- ve
6	55882	9000	67	29	4	11	25	13	7500	65	32	3	6	12	13.2	Nil	+	3-4 pus	Nil	+	1-2 pus	Nil	- ve	Nil	- ve
7	57250	8500	63	36	1	16	30	10.6	8000	62	37	1	10	15	11.6	Nil	Nil	Nil	Nil	Nil	NIL	Nil	- ve	Nil	- ve
8	57225	9000	52	36	12	9	20	12	8600	60	35	5	5	10	12.5	+	Nil	2-3 pus	Nil	Nil	NIL	Nil	- ve	Nil	- ve
9	57674	7500	70	27	3	5	12	12	8000	65	34	1	5	12	13	Nil	Nil	NAD	Nil	Nil	NAD	Nil	- ve	Nil	- ve
10	58130	9100	68	30	2	25	52	10.5	9000	69	30	1	10	15	11	Nil	Nil	NAD	Nil	Nil	NAD	Nil	- ve	Nil	- ve
11	59363	9000	68	25	7	14	28	11.4	9000	68	25	7	5	10	12	Nil	Nil	1-2 pus	Nil	Nil	1-2 pus	Nil	- ve	Nil	- ve
12	60324	7900	65	29	6	13	27	13.5	8000	70	28	2	5	10	13.5	Nil	Nil	few pus	Nil	Nil	NAD	Nil	- ve	Nil	- ve
13	61335	7900	66	30	4	2	4	14.2	8100	65	32	3	2	4	14.2	Nil	Nil	1-3 pus	Nil	Nil	NAD	Nil	- ve	Nil	- ve
14	62073	8900	65	32	3	12	25	10.6	8500	60	38	2	2	4	11	Nil	Nil	1-2 pus 1-3 epi	Nil	Nil	NAD	Nil	- ve	Nil	- ve
15	62079	8500	62	36	2	15	33	12.5	8500	62	36	2	5	10	13	Nil	Nil	NAD	Nil	Nil	NAD	Nil	- ve	Nil	- ve
16	62132	8600	60	38	2	1	3	10	8400	64	35	1	2	4	11	Nil	Trace	1-2 epi	Nil	Nil	1-2 epi	Nil	- ve	Nil	- ve
17	62383	8500	69	27	4	6	13	14	8000	56	42	2	4	6	14	Nil	Nil	NAD	Nil	Nil	NAD	Nil	- ve	Nil	- ve
18	62398	7900	65	32	3	29	65	11.4	8100	65	33	2	10	15	12	Nil	Nil	1-2 epi	Nil	Nil	NAD	Nil	- ve	Nil	- ve
19	65414	8000	67	30	3	7	17	12.8	8000	65	33	2	5	10	13	Nil	Nil	few pus	Nil	Nil	NAD	Nil	- ve	Nil	- ve
20	68894	8100	63	34	3	2	4	13.5	7800	67	30	3	2	4	13.5	Nil	Nil	1-2 pus	Nil	Nil	NAD	Nil	- ve	Nil	- ve

RESULT OF TREATMENT IN OP PATIENTS

S.No	O.P.No	Name	Age	Sex	Occupation	Treatment starting date	End of the Treatment date	Duration of illness	No. Days Treated	Results
1	49611	Sudalai Muthu	58	M	Carpenter	02.07.2012	29.07.2012	6 months	28	Good
2	50604	Thavamani	52	F	House wife	05.07.2012	10.08.2012	1 year	35	Good
3	51264	Dharmalingam	66	M	Mason	07.07.2012	03.08.2012	6 months	28	Good
4	52927	Thomas	44	M	Clerk	13.07.2012	11.08.2012	3 days	28	Fair
5	53336	A.Murugan	37	M	Carpenter	14.07.2012	12.08.2012	6 months	28	Good
6	55882	Thangavel	50	M	Driver	24.07.2012	29.08.2012	1 year	35	Good
7	55250	Malaiammal	40	F	House wife	28.07.2012	02.09.2012	1 year	35	Good
8	57225	Isakki	45	M	Sales Man	28.07.2012	02.09.2012	1 year	35	Good
9	54674	Muthukumar	34	M	Cook	30.07.2012	26.08.2012	2 months	28	Good
10	58130	Ramalakshmi	62	F	House wife	31.07.2012	27.08.2012	6 months	28	Fair
11	59363	Amutha	51	F	House wife	04.08.2012	31.08.2012	2 years	28	Good
12	60324	Natarajan	50	M	VAO	07.08.2012	10.09.2012	2 years	35	Good
13	61335	Mohammed Rafi	24	M	Carpenter	10.08.2012	13.09.2012	1 year	35	Good
14	62073	Vasantha	70	F	House wife	13.08.2012	09.09.2012	3 days	28	Good
15	62079	Arunkumar	52	M	Farmer	13.08.2012	16.09.2012	2 years	35	Good
16	62132	Pitchammal	45	F	Mason	13.08.2012	09.09.2012	2 weeks	28	Good
17	62383	Velmurugan	34	M	Electrician	14.08.2012	17.09.2012	4 years	35	Good
18	62398	Shanthi	50	F	Teacher	14.08.2012	10.09.2012	3 years	28	Good
19	65414	Benni	46	M	Tailor	25.08.2012	21.09.2012	1 year	28	Good
20	68894	Selvaraj	30	M	Loadman	05.09.2012	09.10.2012	4 month	35	Good

RESULT OF TREATMENT IN IP PATIENTS

S.No	I.P.No	Name	Age/Sex	Occupation	Duration of illness	Date of Admission	Date of Discharge	No. Days Treated		Total days	Results
								IP	OP		
1	2215	Pappa	72	House wife	10.07.2012	30.07.2012	2 years	20	10	30	Good
2	2514	Petchiammal	60	Cook	01.08.2012	03.09.2012	3 years	34	7	41	Good
3	2795	Ganapathy	48	Watchman	23.08.2012	11.09.2012	3 months	20	14	34	Good
4	2803	Alagammal	50	Farmer	24.08.2012	14.09.2012	2 months	22	10	32	Good
5	2813	Isakkiammal	38	Tailor	25.08.2012	14.09.2012	6 months	21	10	31	Good
6	3100	Lakshmanan	55	Sales man	18.09.2012	09.10.2012	2 months	22	10	32	Good
7	3162	Poolpandi	56	Carpenter	22.09.2012	12.10.2012	1 year	21	10	31	Good
8	3311	Ulagaiah	55	Carpenter	08.10.2012	27.10.2012	3 months	20	10	30	Good
9	3515	Deivanai	50	House wife	11.10.2012	30.10.2012	1 month	20	10	30	Good
10	3556	Maryammal	45	House wife	12.10.2012	01.11.2012	2 weeks	20	10	30	Good
11	3564	Motilal	53	Tailor	13.10.2012	02.11.2012	1 year	20	14	34	Good
12	3578	Mala	36	Sales man	14.10.2012	06.11.2012	2 years	24	14	38	Good
13	3650	Shanmugathai	50	House wife	23.10.2012	19.11.2012	1 year	28	10	38	Good
14	3668	Krishnamal	60	House wife	25.10.2012	19.11.2012	6 months	26	10	36	Good
15	3669	Isakki	45	Carpenter	25.10.2012	13.11.2012	3 months	20	10	30	Good
16	3670	Duraichi	55	Cooly	25.10.2012	19.11.2012	1 month	26	10	36	Good
17	3721	Chellammal	45	Cooly	30.10.2012	19.11.2012	1 month	20	10	30	Good
18	3748	Selvamani	55	House wife	01.11.2012	20.11.2012	2 years	20	14	34	Good
19	3766	Ganapathy	50	Electrician	03.11.2012	22.11.2012	6 months	20	10	30	Good
20	3778	Bakkiathai	30	Tailor	05.11.2012	19.11.2012	1 year	15	20	35	Good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Percentage
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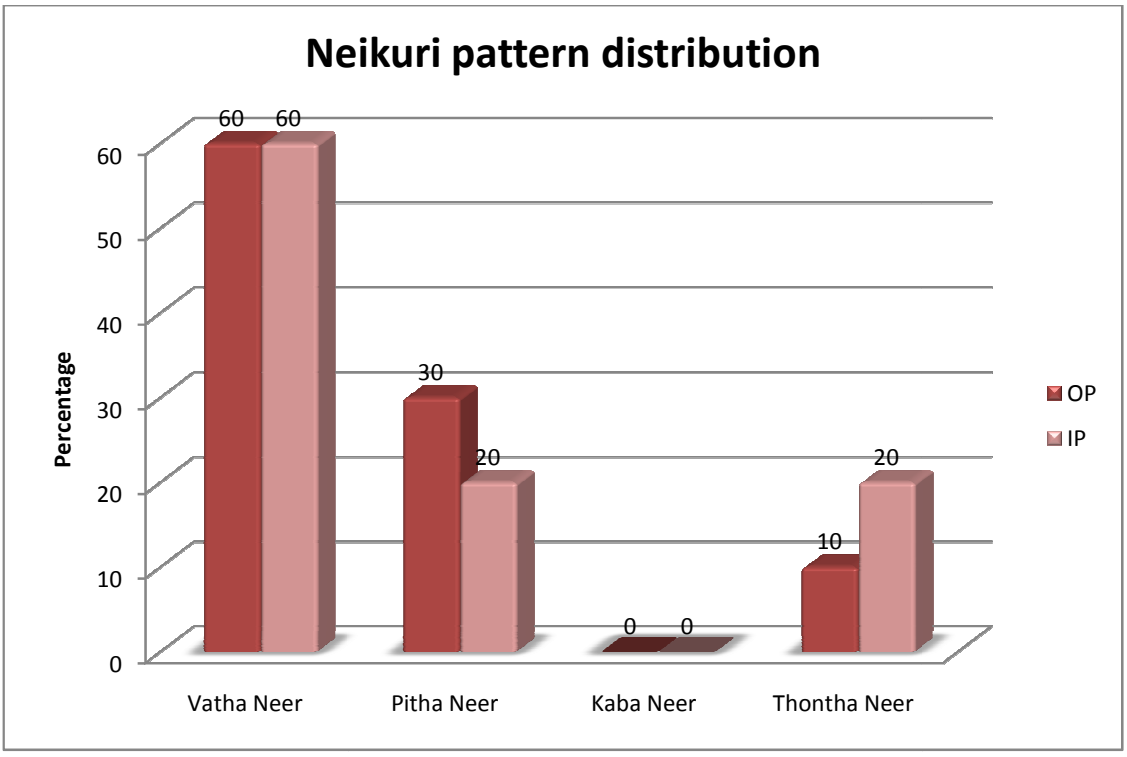
10
20
30
40
50
60
70
80
40
25
40
30
75
80
40
45
5
0
50
65
Alcohol
Smoking
Irregular diet
Psychological
Hereditary
Drug (NSAID)
OP
IP


Neikuri pattern distribution
Percentage
60
50
40
30
20
10
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60
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30
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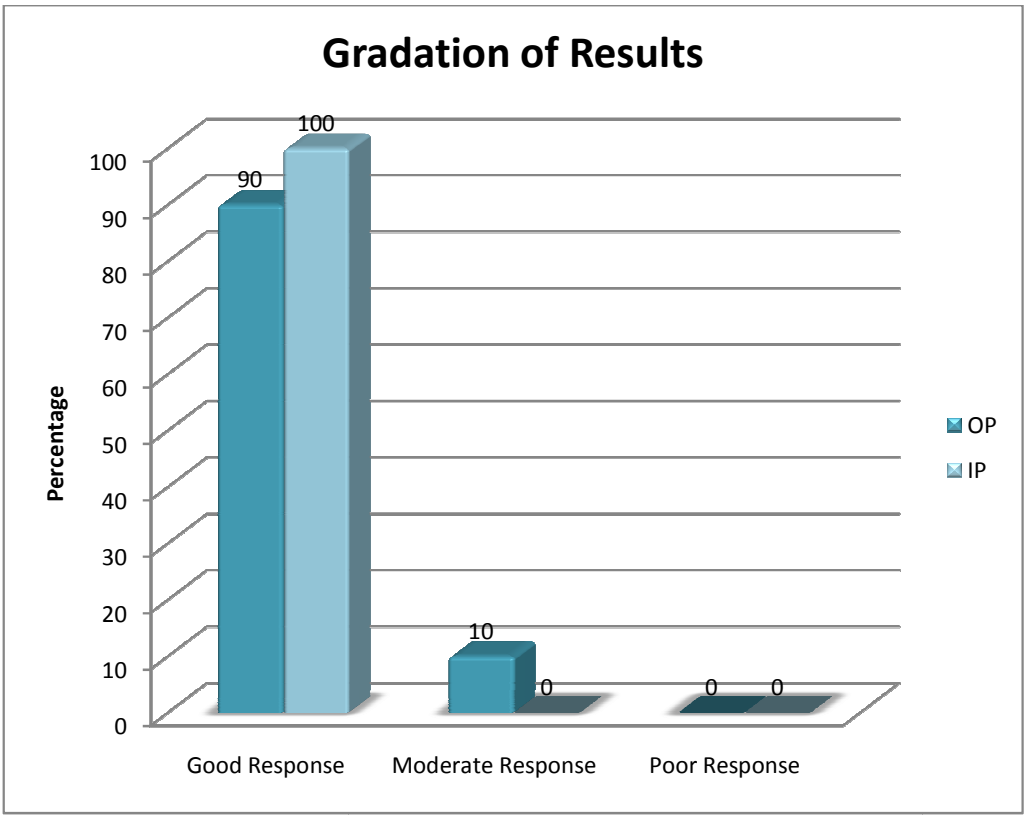
0
0
10
20
Vatha Neer
Pitha Neer
Kaba Neer
Thontha Neer
OP
IP


Gradation of Results
Percentage
100
90
80
70
60
50
40
30
20
10
0
90
100
10
0
0
0
Good Response
Moderate Response
Poor Response
OP
IP

Dr.E.Kandasamy @ Kumar.,M.D.D.M.

Consultant Gastroenterologist, Hepatologist,

Endoscopist. Ph:9443323100

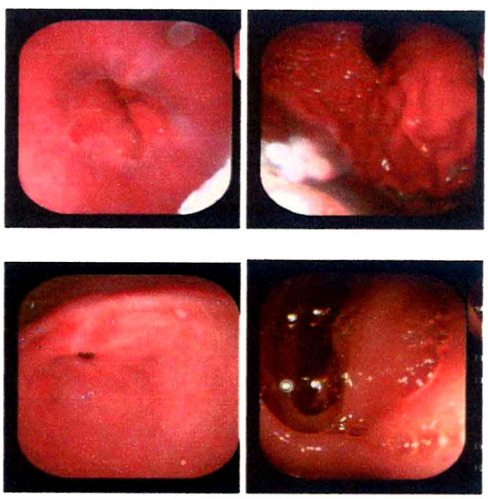
Aarthi Scans

Tirunelveli-2

email:drkumar66@yahoo.co.in

Name : Mrs.Santhi
Age: 50/f

Date :22.08.2012
Ref.by:Dr.Baby malathi M.D(siddha)P.G



Esophagus: OGJ at 38cms.GrII inflammation seen over distal 5cms.

Stomach: Antrum moderately inflamed. Clean Based ulcer seen over distal Anturm.

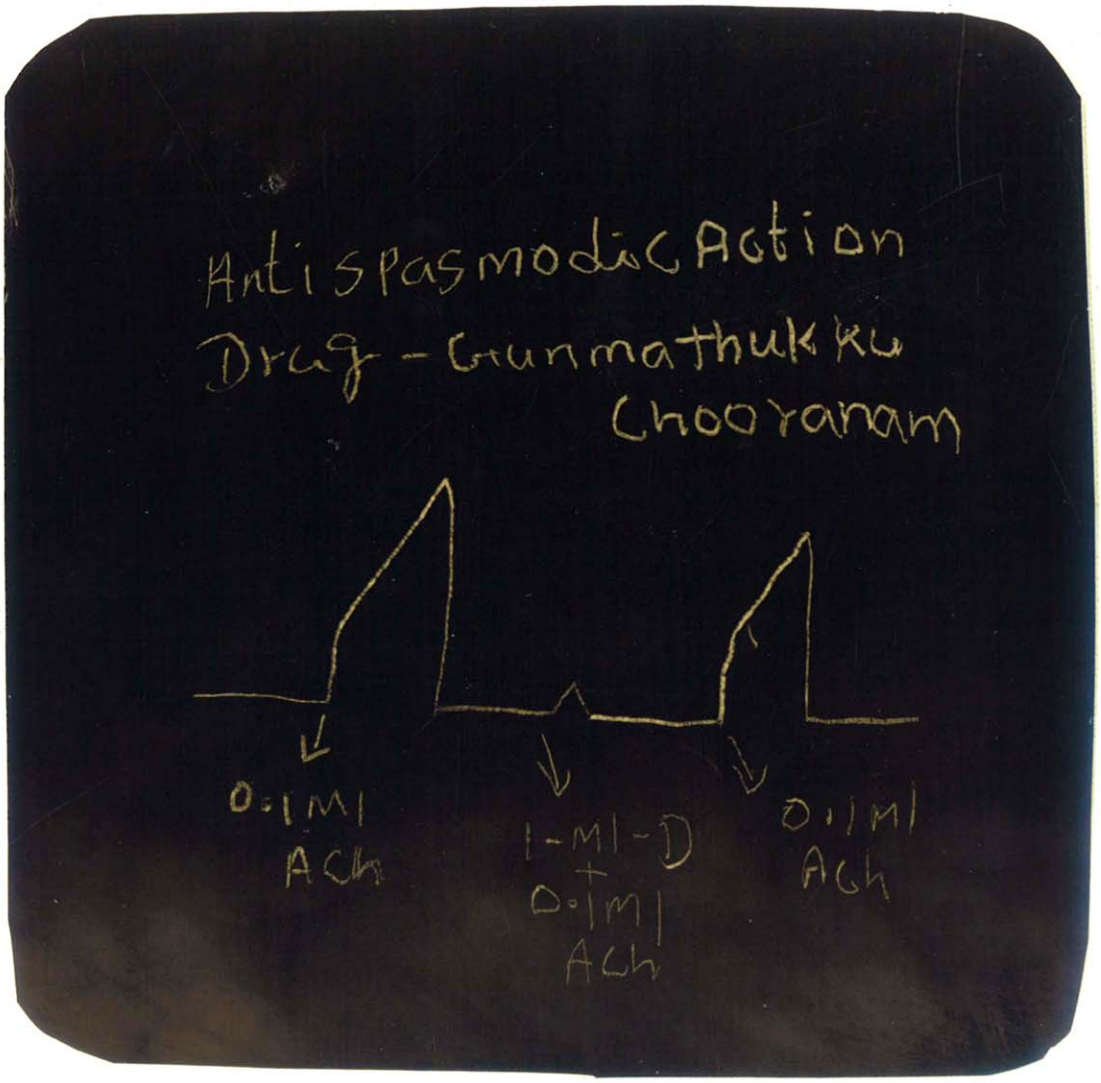
Duodenum: Bulb and D2 appear normal.

Impression : GrII distal esophagitis. Moderate antral gastritis.

Active gastric Ulcer.

Dr.E.Kandasamy @ Kumar.,M.D.D.M.

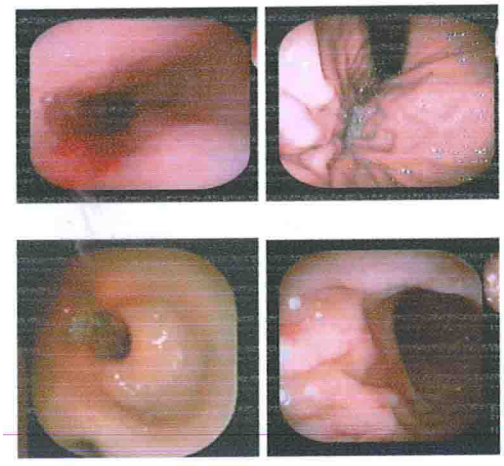
Antispasmodic Action of Trial drug
Gunmathukku Chooranam



Dr.E.Kandasamy @ Kumar,M.D.D.M.
Consultant Gastroenterologist,Hepatologist
Shifa Hospital
Tirunelveli-1 Ph: 9443323100

Name: Mr.Sudalaimuthu **Date: 03.03.2012**

Age: 65/m



Esopahgus: OGJ at 38cms . Grll inflammation seen over distal 5cms.

Stomach:. Antrum moderately inflamed. Multiple clean based ulcers seen over pyloric channel.Biopsy taken.

Duodenum: posterior wall Bulb and D2 appear normal.

Impression: Grll distal esophagitis.
Moderate antral Gastritis
Pyloric Channel ulcers. forrest III.

Dr.E.Kandasamy @ Kumar,M.D.D.M.

Dr.E.Kandasamy @ Kumar.,M.D.D.M.

Consultant Gastroenterologist, Hepatologist,

Endoscopist. Ph:9443323100

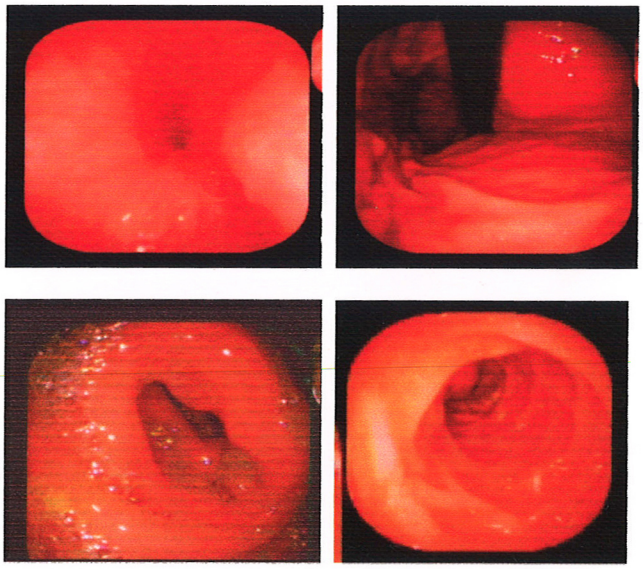
Aarthi scan centre

Vannarpettai

email:drkumar66@yahoo.co.in

Name : Mr.Muthukumar **Date: 04.05.2012**

Age: 51/m



Esophagus: OGJ at 38cms.GrII inflammation seen over distal 5cms.

Stomach: Entire stomach severely inflamed. GJ stoma seen. Both loops entered normal.

Duodenum: Superficial ulcer seen over posterior wall of Bulb and D2 appear normal..

Impression : GrII distal esophagitis. Severe pangastritis. Normal Status GJ

Active DU Forrest III .

Dr.E.Kandasamy @ Kumar.,M.D.D.M

YOGASANAS

Bhujanga Asanam

Salabasanam

Pavanamukthasanam

Patchimoathasanam

Uthana Padmasanam

Savasanam

Fig : 1 Part of Stomach

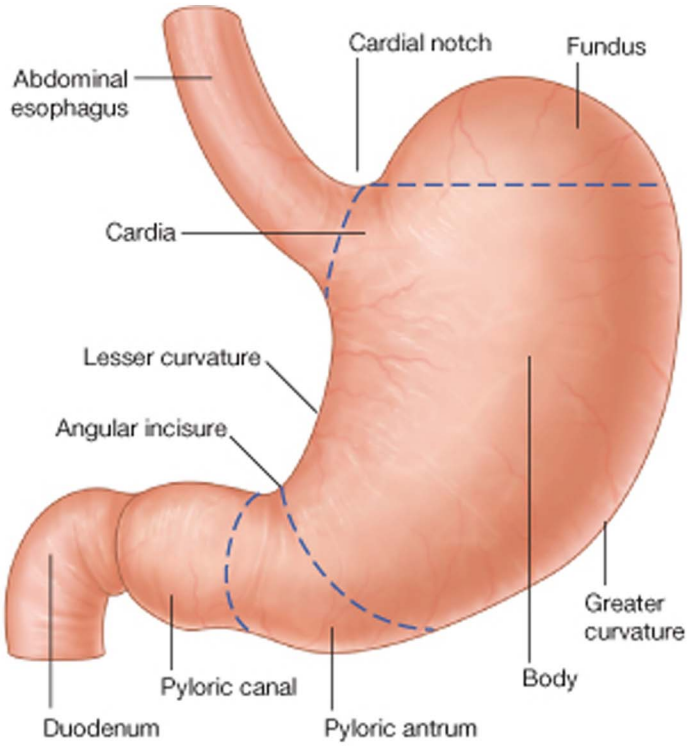


Fig : 2 Part of the deodenum

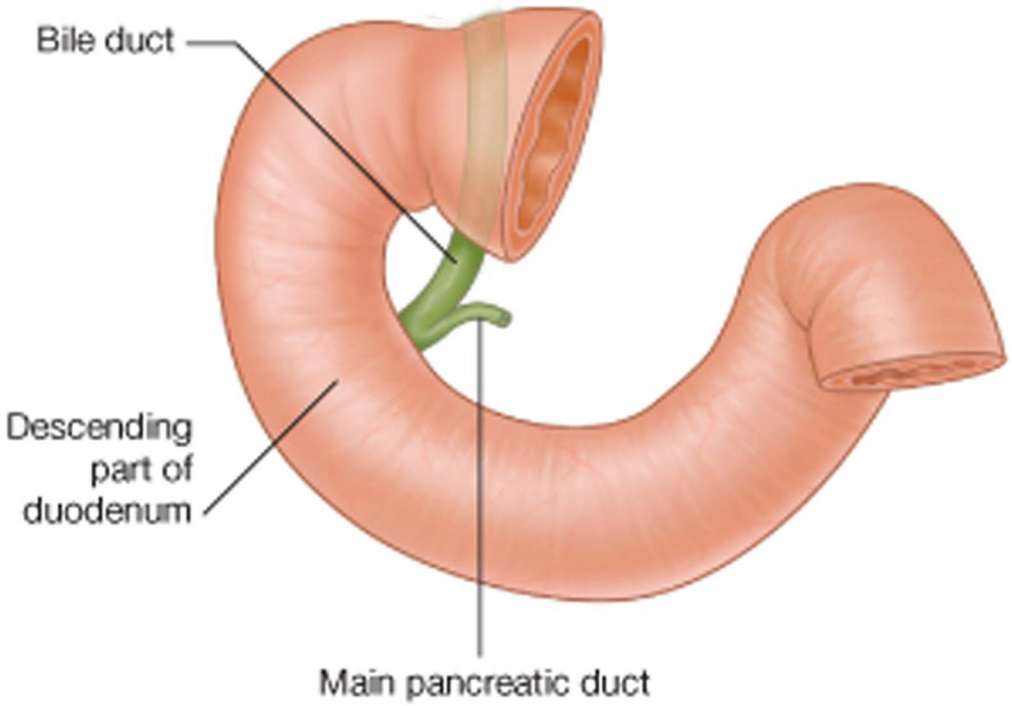


Fig : 3 Helicobacter pylori

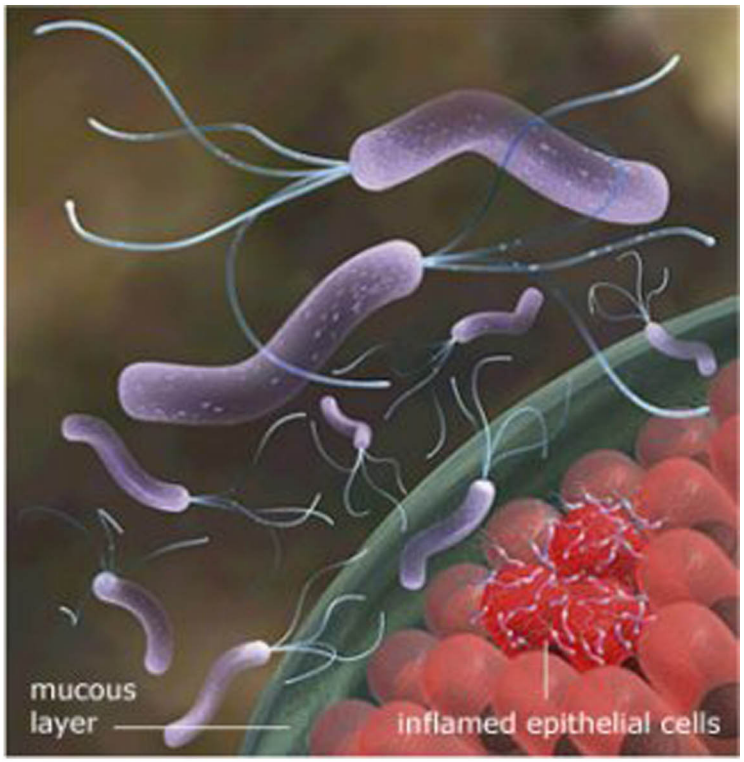
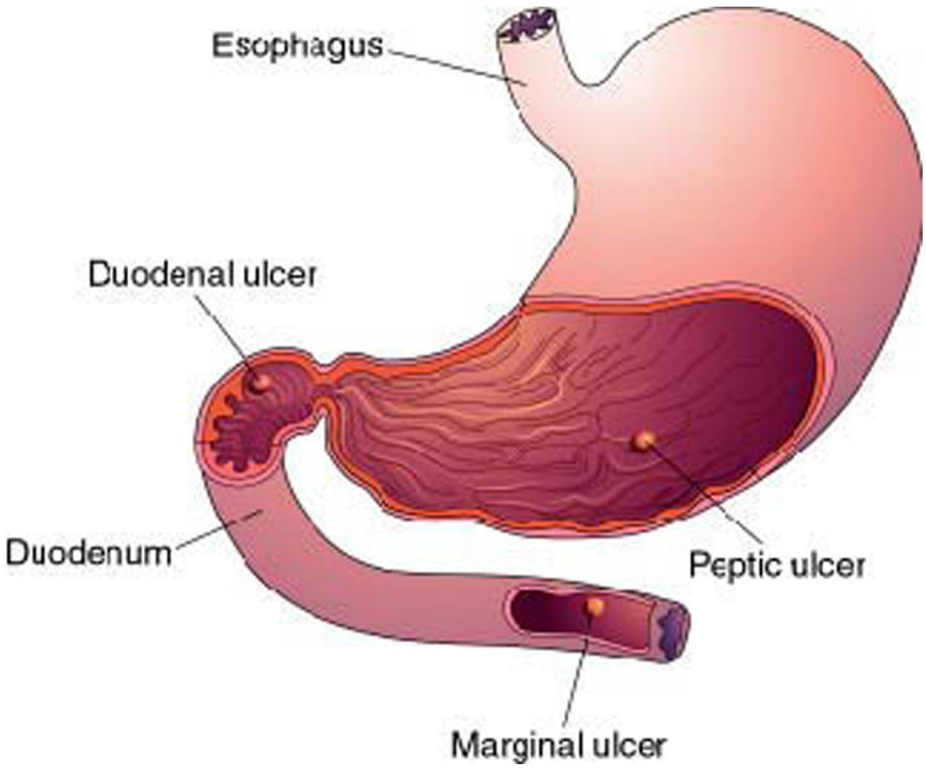
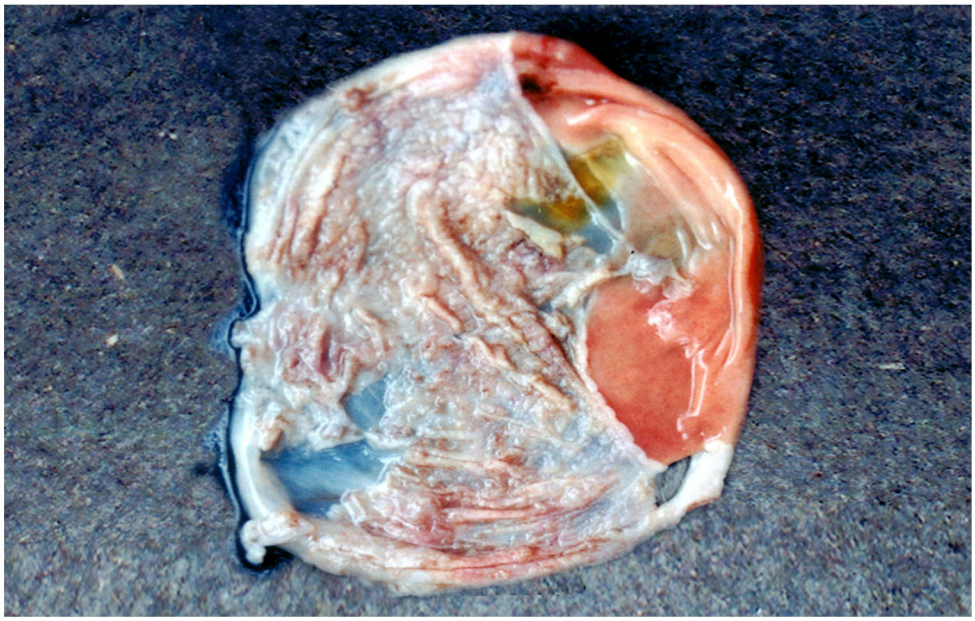


Fig : 4 Peptic Ulcer



ANTI ULCER ACTIVITY
CONTROL



MANIMANTHIRATHY CHOORNAM

GUDUCHIYATHY KASHAYAM

நெய்க்குறி

வாதநீர்

பித்த நீர்

குன்மத்துக்கு சூரணம் - சேரும் சரக்குகள்

மிளகு

சோம்பு

நாயுருவி

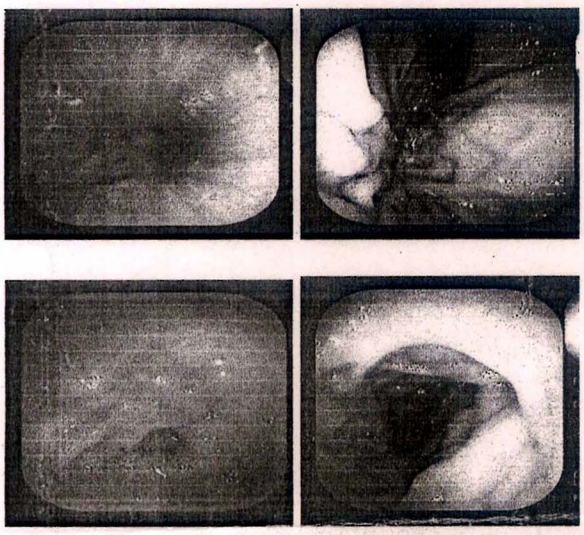
மண்டூர செந்தூரம்

குன்மத்துக்கு சூரணம்

Dr.E.Kandasamy @ Kumar,M.D.D.M.
Consultant Gastroenterologist and Hepatologist
Aarthi scans -vannarpettai
Tirunelveli-2 Ph: 9443323100

Name: Mrs.Petchiammal **Date: 07.08.2012**

Age:60/f



Esophagus: OGJ at 38cms.Grll inflammation seen over distal 5cms.

Stomach: Entire stomach Moderately inflamed .

Duodenum: Superficial ulcers seen over Bulb and D2 appear normal.

Impression: Moderate Pangastritis and Bulbar ulcers.

Dr.E.Kandasamy @ Kumar,M.D.D.M.

DR.R.SELVASEKARAN,M.D.,D.M.,(GASTRO)

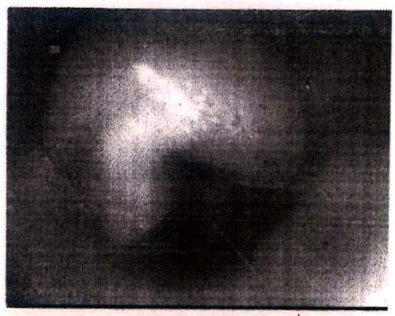
4, LOURDHU STREET, NEAR MURUGANKURICHI SIGNAL

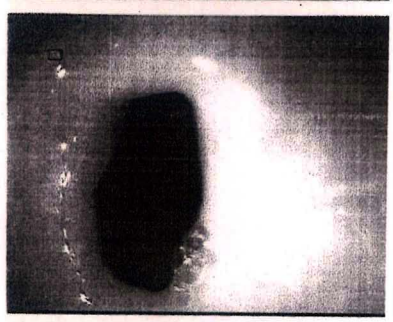
TRIVANDRUM ROAD, PALAYAMKOTTAI - 627002

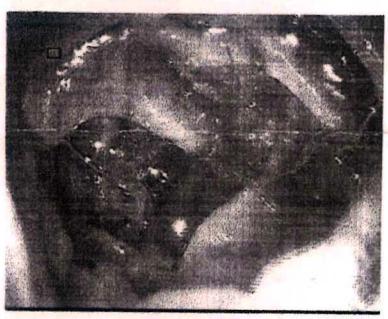
NAME : MOHD.RAFI **HOSPITAL.NO** : 00123 **AGE** : 23

SEX : MALE **REFERRED BY** : Dr. **DATE** : 26/09/2011

GASTROSCOPY REPORT







INDICATION : ? GERD

PREMEDICATION : Xylocaine spray

FINDINGS

OESOPHAGUS : Normal, No ulcer / stricture / web.

O-G JUNCTION : At 38 cm, Lax LES,
Gastric mucosal prolapse+.

STOMACH :

FUNDUS : Normal

BODY : Normal

ANTRUM : Normal, No ulcer / erosion.

PYLORUS : Normal

DUODENUM

FIRST PART : Normal

SECOND PART : Normal

IMPRESSION : INCOMPETENT LES,
GASTRIC MUCOSAL PROLAPSE.

BIOPSIES : Not taken

Dr.R.SELVASEKARAN,M.D.,D.M.,(Gastro)

SS
ESEARCH LABORATORIES

We thank you for your kind reference

MRD No: A 5007 2012

Report

Reference from Dr	Dr.E.Kandhaswamy @ Kumar MD DM
Hospital	Shifa Hospitals
Name of the Patient	Mr.Mohamed Rafi
Age	24 years
Gender	Male
Nature of Specimen	Colonoscopic Biopsy
Sample Received on	12 .07.12
Fixed in	Formalin
Gross Description	Specimen of tiny grey pink tissue fragment 0.22cc

Microscopic Description

Section studied shows colonic mucosa with focal erosion of the lining and chronic non specific inflammatory cell infiltration with areas of haemorhage and congestion

Impression: Chronic Nonspecific Colitis

Date: 12 07 12

Kindly correlate this report with clinical parameters of the patient.

Dr. K. Shantaraman M.D
Consultant Pathologist

Dr. K. Swaminathan M.D
Consultant Pathologist

10, S.N. HIGH ROAD, NEAR TOWN ARCH, TIRUNELVELI TOWN, TIRUNELVELI - 627 006 PH : (0462) 2330266

DEPARTMENT OF MEDICAL GASTRO ENTEROLOGY

TIRUNELVELI MEDICAL COLLEGE

TIRUNELVELI – 11

GI

UPPER ENDOSCOPY

Name : Penni

Age – Sex : 46/m

I.P. No : OP

OP No. : 1739/12

Date : 3/9/12

Scopy No: 1739/12

Instrument : 5/3/12

Done by :

Dr. R. SELVA SEKARAN,
M.D. (Gen), D.M. (Gastro)

Oesophagus : Distal 5cm is inflammed

OG Junction : AT 38cm;

Stomach :

Funds : } (N)
Body : }
Antrum : inflammed
Pylorus : (N)

Duodenum

D1 : } (N)
D2 : }

Impression : • Grade II distal esophagitis
• moderate antral gastritis

for Dr

Dr. E. Kandasamy @ [illegible] MDD
Consultant Gastro Enterologist, Reg.No. 462[illegible]

~~Dr. R. SELVA SEKARAN,~~
~~M.D. (Gen), D.M. (Gastro)~~

Tirunelveli Medical College Hospital/
Department of Gastro
Enterology & Liver Clinic.

Dr.E.Kandasamy @ Kumar.,M.D.D.M.

Consultant Gastroenterologist, Hepatologist,

Endoscopist. Ph:9443323100

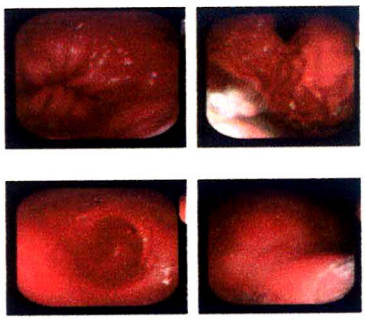
Sri Eshwar Gastro & Liver centre

Tirunelveli-627357

email:drkumar66@yahoo.co.in

Name : Mr. Velmurugan **Date:** 04.09.2012

Age: 35.m



Esophagus: GrII inflammation seen over distal 5cms.

Stomach: Entire stomach severely inflamed .

Duodenum: Erosions seen over Bulb and D2 appear normal.

Impression : GrII distal esophagitis.Severe erosive Pangastritis.

Dr.E.Kandasamy @ Kumar.,M.D.D.M.